CHAPTER I
INTRODUCTION

1.1 Background of the Study

CVP is one of the more important approaches that have been developed to facilitate effective performance of the management process.PPC is an advance decision of expected achievement based on the most efficient operation standard in effect or in prospect at the time it is established against which actual accomplishment is regularly compared in the world of Nine Meier Jack C. and Scimigal Raymond S. “profit planning is an estimation and predetermination of revenues and expressed that estimates how much income will be generate and how would be in order to meet investment and profit requirement. In the case of institutional operation it presents a plan for spending income in manager that does not result in loss".

Usually profit does not just happen. Profit is managed, when a management plans its profit performance that is known as profit planning .profit planning is a part of overall planning process of an organization. Befor we can make an intelligent approach to the managerial process of profit planning, it is important that we understand the management concept of profit. There are several different interpretations of term ‘profit. According to an economist , profit is the reward for entrepreneurship for risk taking ,leader of labor might say that profit is a measure of how efficiently labour has produced and that it provides a base for negotiation a wage increase an investor will view it as a gauge of the return on his/her money . An internal revenue agent might regard it as a base for determining income taxes. An accountant will explain it simply as the excess of firm's revenue over expenditure of producing revenue in a given fiscal year.

Profit is the ultimate goal of every business house. They involve in business for making profit. Profit cannot be achieved easily. It should be managed well with better managerial skill. So, profit is the planned and controlled output of management .By element, profit is the difference of revenue and cost. Profit plan, thus refers to the planning of revenue (i.e., increase the revenues) and Planning of cost (i.e. increase the efficiency of cost).

Planning is the first essence of management and all other functions are preformed within the framework of planning, planning means deciding in advance what is to be done in future ? Planning starts from forecasting and predetermination of future event. Planning is the whole concept of any business organization. No firm can achieve its predetermined goal and objective in the absence of proper plan. Hence, it is life blood of any organization which makes efficiently run towards the competitive environment.

Control can be defined as the process of measuring and evaluating performance of each organizational component of an enterprise and initiating corrective action when necessary to ensure efficient accomplishment of enterprise objectives, goals, policies and standards, planning establishers the goals objective, polices and standards of an enterprise.

Thus, profit planning and control is an important approach, mainly in profit oriented enterprises. Profit planning is merely a tool of management. It is not an end of management or substitute of management. It facilitates the managers to accomplish managerial goals in a systematic way.

Profit planning and control is used for the development and acceptance of objective and goals and moving organization efficiently to achieve the objectives and goals. The broad concept of PPC entails an integration of numerous managerial approaches and techniques, such as sales forecasting sales quota system, capital budgeting, cash flow analysis, cost-volume-profit analysis and variable budget, time and motion study, standard cost accounting, strategic planning, production planning, management by objectives, organizational planning, managerial planning and cost control .PPC has wide application. It can be applied in profit and non profit, manufacturing and non manufacturing organization.

Out of the various profit planning tools, C-V-P analysis is the most important tool. The systematic relationship between cost, volume and profit is known as cost-volume-profit analysis .It is an analytical tool for analysing the relationship among cost, price, profit, sales and production volume. Mainly there are three elements in cost-volume-profit analysis. They are cost, sales or production volume and profit .All these terms are interconnected and depended on one another. For instance, profit per unit of a product depends on its selling price and cost per sales. The selling price to a greater extent will depend upon the cost and cost depends upon the volume of production.

It is highly essential for the management to have the complete knowledge about the interrelationship among the cost, volume and profit. A study concerning this interconnection is under taken through cost-volume-profit analysis. Cost- volume-profit is analysis extremely helpful in profit planning and control management decision, cost control, budgeting etc.

1.2 Brief Overview of Salt Trading Corporation limited and National Trading limited.

1.2.1 Salt Trading Corporation Limited

Salt trading corporation limited is also one of the public enterprises of Nepal, which was established in 2020 B.S. (1963 A.D.) through the joint efforts of His Majesty Government Nepal and private sector to ensure proper supply of consumer's items throughout the country. Its first task was to makes edible salt readily available. The irregularities in the distribution have to correct through organized supply and delivery system. The salt trading corporation limited was not only able to meet the demand but also maintain quality and later was able to provide lionized salt to prevent goiter a diseases that once plagued the Nepalese society.

This success in supply management led to the addition of essential commodities such as sugar, tea, wheat, tentiles, grams, maize, milk, oil seeds, fresh and processed fruits, oil cement, coffee and processed eatables into its distribution network profit form training activities were invested in the production of basic necessities to boost self sufficiency accelerate economic growth and gain public support.

From its infancy as a trading house, salt trading corporation limited has matured into a diversified conglomerate with unmatched distribution network all over the country. Its twenty branches scattered throughout the country providing the people easy access to import outlets for good produced in various parts of the country. The employment opportunities that arise through the activities of the organization are hard to quantify as they also providing plenty of self employment opportunity. The salt trading group directly employ about 2500 individuals all of the office in the country.

Salt trading corporation has equity in many pioneering and leading industries in the country such as Khaddhya U. Ltd. Spinning Mills Ltd. Gorachakali Rubber Udyog Ltd. Morang Sugar Mills Ltd and Gharelu Hastakala Udyog Ltd. Nepal Vegetables Ghee Udyog Ltd. The organization has also been assigned the responsibility of implementing the Nepal India Goiter Control project. The groups turn over exceeds NRs 2 billion and investment in fixed assets in close to NRs 1.5 billion.

Salt trading corporation limited a major catalyst in bringing about the desired economic changes and growth in Nepal, signing of the first salt contract between the representatives of STCL and state trading corporation of India on 14^{th} July 1965

The organization's accessibility to these remote areas have been turned out to be very rewarding and fruitful as it also provides the opportunities to procure commodities that are locally produced in different part of the country. STCL has been playing a very significant role in procuring goods from different parts of the country and supplying them in areas where they derive optimum value.

The organization began its trading activities by dealing in salt and now it imports produces and supplies good of vast diversities. Industrial products, agricultural products and industrials raw materials are the major components of its

Salt trading corporation limited deals with importing products and distributing or taking it to public reach through sales. Sales, cost profit analysis is very important tool of profit planning and control. This tool examines the behavior of total revenue, total cost and operating income as changes occur in the output level, the selling price, the variable cost per unit and fiscal cost of a product. It is an analytical technique for studying the relationship between volume, cost, prices and profits. It is used to determine the profit planning process of the firm. It is a simple but powerful tool for planning of profit and therefore, of operations. It provides an answer to" what if" theme-telling the volume required producing a target amount of profit. For a coordination approach towards achieving production and profit goals, it has grown into a basic technique with a focus on future. It has gained greater utility and respectability.

In Nepalese public enterprise the objectives are mainly social welfare or they are for fulfilling the social obligation. Basically objectives of most of the public enterprise is social welfare, profit is less emphasized. But they cannot survive only with social concern so have commercial obligation too. In this case corporation should earn profit also. Therefore cost-volume-profit analysis is the most important part of every business organization to achieve their goals whether they are manufacturing or non-manufacturing and public or private

1.2.2 National Trading limited

National Trading limited(NTL)was established as a public limited company in march 1962 A.D. under the Nepal company Act, in public sector completely owned Government of Nepal . NTL was created in order to anylize commodity aids from the Peoples Republic of China and USSR with a view to meet the local cost of development projects initiated by these countries through the sale of aids goods in the domestic market. Previously, this function was handled by the Department of Commerce, GoN.

National Trading Limited is under the Ministry of Commerce Government of Nepal (GoN). It has a Board of Directors, which consists of five members, is responsible for formulating short and long-term policies on NTL's periodical plans , programmers and polices . The Chairman and the General |Manager are responsible for the appropriate execution of the plans, programmers and policies formulated and decided by the Board .The chairman and the board member are all appointees of GON .The Board of NTL has representation in it's from the most relevant ministries and department of Government of Nepal .Since the Board member has been drawn from the interrelated ministries of GON, this has resulted in easy coordination and efficient decision –making at the policy level

In order to create a better channel to serve the growing needs of the national economy and the people at large ,through the regular supply of essential goods at reasonable prices, GON Set up the NTL as a state Trading Organization .It was entrusted with the functions of engaging on all kinds of trading activates including quota goods to be imported from India for the purpose of establishing domestic prices, regularizing the supply of basic construction materials, industrial raw materials ,machinery and equipment , and consumer goods As NTL began to procure goods from diverse sources and also as it was exporting to diverse markets NTL through its activities definitely did support the country's policy of trade diversification.

NTL's organization structure has undergone continuous as per the increasing volume of trading activates, which are also guided by the growing development works under various plan periods as well as because of the ever increasing needs of the people in general for consumer goods .As result ,NTL has a diversified organization structure consisting of eight different departments at central office :it has five regional offices ,ten branch offices and one foreign based office in Calcutta ,besides the NTL head office in Kathmandu .

1.3 Statement of the problem

In the context of the Nepal Corporation are still in the infancy position. Through the government in respect of industrialization announces various alternative and liberal policies ,new establishment on public corporation in not satisfactory .the financial performance of established corporation are operating in loss and such a conditions established corporation are not encourage for their betterment . There may be various and different reasons for the poor performance of the public corporations such reasons should be invested and taken corrective action for the improvement in their performance.

STL and NTL have established under the joint public and private ownership as a service oriented trading business. A huge amount of investment has been made but the performance of the company is not fully satisfactory. So it has passed a long journey . The profit and loss trend of the company is latest .

Public and private trading enterprises have been suffering due to insufficient planning and ongoing insurgency. Trading enterprises are playing a dominant role in the Nepalese economy .Trade and business sector are sick in financial progress and business activities .The ongoing insurgency in the country has adverse effect on the performance of the trade and commerce sector. Some of the problems facing by the trading corporation are follows.

- Limited market opportunity
- Insufficient emphasis on the effective planning
- Lack of efficient resource utilization
- Unsatisfactory financial performance
- Inadequate |HRD efforts
- Open boarder
- Political interferences
- Limited infrastructure and facilities
- Low level of return
- Lack of sufficient capital and secure environment for investment

STCL and NTL are the trading enterprise, which has been operating at a profit but the growth of return has been improving. To solve this planning an application of BEP, under the profit planning system is necessary to improve the operative profit .The following are the problems to be taken into consideration in this study:

- Do they plan for profit
- Do they have various functional budgeting systems as an integral part of profit planning?

- What ideas the basis for sales forecasting and it's achievements?
- Is there appropriate planning system adopted by STCL and NTL?
- What is the overall profit train STCL and NTL?
- What steps should be taken to strengthen the profit performance of STL and NTL?

1.4 Objectives of the Study

The main objectives of the study is to find out application of profit planning and control in trading enterprise, and its limitation, to make necessary recommendation on the same to increase the profitability of the concern . In doing so, comparative study of salt Trading Corporation limited and National Trading Corporation limited and National Trading Limited will be done on the following aspects.

- To analyse the impact of Cost –Volume –Profit on performance of the STCL and NTL.
- To show the relationship of cost , volume profit of STCL and NTL
- To examine various accounting ratios to measure the profitability and efficiency of the Salt Trading Corporation Limited and National Trading Limited
- To provide suggestions and recommendation on the basis of major findings.

1.5 Significance of the study

The present research work is the study of the practice of comparative cost volume profit analysis in trading corporation. This study will be significant in the following ways:

- It analysis the nature of cost incurred by STC & NTL.
- It examines the application of CVP analysis in the companies
- It provides literature to researchers who want to carry for the research on the similar issue
- This study is also directed towards providing necessary recommendations to the related department of the company

1.6 Limitation of the Study

The study is confines to profit planning and control of Salt trading corporation Limited and National Trading Limited. Having reliable and sufficient data and necessary alternatives constraints the limitations of the study are as follows:

- Cost –volume – profit analysis covers the period of last five years data ranging from the year 2062 to 2066 only.
- The study would base on primary as well as secondary data.
- The accuracy of this study is based on the true response and the data available from management of the company.
- This study would only concerned with fulfilling the partial requirement in Master of Business studies (MBS)
- Due to limited time and resources constraint, these studies will neither the comprehensive nor extensive.

1.7 Organization of the Study

This study has divided into five parts. Introduction, review of literature, research methodology, presentation and analysis of data, conclusion, summary and recommendations.

Chapter-I: introduction

This chapter is introduction framework that includes background of the study focus of the study, profile of the company , statement of the problems, objectives of the study , significance of the study , limitations of the study and organization of the study .

Chapter –II: Review of the Literature

This chapter will review the existing literature in the relevant area. mainly, it includes review of theories and journal, review of previous research work and research gap.

Chapter- III: Research Methodology

This chapter deals with methodology that includes research design, sources of data, collection technique method of analysis and research variable.

Chapter-IV: Presentation and Analysis of data

This chapter deals with the presentation and analysis of collected data and information. For this various analytical tools will be used.

Chapter –V: Summary, Conclusion and Recommendations

This chapter will be the final chapter of the study that includes summary of the study, conclusion and recommendations.

The Bibliography appendix will be included in the last of the thesis.

CHAPETR-II

REVIEW OF LITERATURE

The purpose of reviewing the literature is to develop some expertise in ones area to see what new contribution can he made and to receive some ideas for developing a research design. their relevant finding issues, arguments logics and suggestion, which will give a glimpses guide line to go further depth of the study. In other words there has to be continuity in research this continuity in research is ensured by linking the present study with the post research studies.

2.1 Introduction to profit planning

Profit planning is the key point of management .without proper planning, profit will not be achieved in the expected extent. Therefore, every enterprise should plan for profit in a systematic way. Various functional budgets are the basic tools for proper planning of profit and control. Usually, profit don’t just happened, profit are managed. Profit planning is a part of overall planning process of an organization.

Planning and controlling are the primary function of business .without planning and controlling any business cannot run smoothly in competitive and global environment. In fact, profit planning is a managerial technique in written form in which all aspect of business operation for a defined period is included. It is a formal statement of policy, plan, objectives and goals established by the top management. Profit planning is deciding in advance at present, what to achieve in the future. A profit plan is the formal expression of the enterprises plan, goal and objectives stated in financial terms for specific future period of time. Mostly profit plan depends upon the objectives of the organization .plan should achieve the goals of the organization. it determines approach by which the goals or objectives are to be accomplished commonly. The approach is described in the form of strategic policies programmers and procedures for achieving the chosen objectives in a given environment. Profit planning programming also provides proper organizational structure to implement the approved plans and policies.

Profit planning function of management rests upon some fundamentals views that are the conviction that a management can plan the long range destiny of a manufacturing enterprise by making continue streamed of well conceived decision. The thrust of the comprehensive profit planning concept goes to the very heart of management that is the decision making process especially for long range success. The streamed of managerial decision must generate plans and actions to provides the essential inflows that are necessary of support the plant outflow of the enterprises so that realistic profits and return on investment are earned. Continuing generation of profits by managerial manipulation of the inflow and outflow provides the substance of profit planning. (Welsch, 1992:31)

The aggregate meaning of the preparation of various functional annual budgets is known as profit planning .The planning of next year tends to achieve the sales which are directly related with revenue generation. The decision

On new capital investment and financial borrowing represents profit planning in all cases the firm is deciding now how its resources i,e.

manpower, materials, machines and money in the future . A formal profits planning is the key to corporate survival in a world of rapid social change and intense competition. Profit planning can take the best use of firms opportunities and resources to meet the targeted profits

2.1.1. Profit

An organization is established to achieve some goals. It has its own objectives. To achieve the goals of organization objectives should clearly mention. In this competitive globalize business age and organization whether it is public or private profit is essential. Profit isn't change; it is result of successful management. Profit is the primary measure of successful business of a firm or a company .it is the main test of the business enterprises performance .simply, profit is the excess of income over cost of product or services.

The basic objective of running any business organization is to earn profit. Profit is taken to measure the competency and efficiency of the management. Profit isn't just happened but it is managed .if a firm cannot make profit it cannot generate capital of future. Profit is the primary measurement of successful business in any economy .Profit is a residual income left after the payment to other factor of production. The difference between the outflows of expenses (i.e. cost of production, selling and distribution of that products etc.) and inflow of income (i.e. sales prices) is called profit. It is a reward for business activities. Profit is obtained by subtracting the cost from revenue. Profit determines the financial position , Profit serves as a yardstick for judging the competence and efficiency of the management.(maheshwari,2000:171)

The word “profit” implies a comparison of the operation of the business between to specific date which is usually separated by an interval of one year .In order to optimize those corporate source of wealth in which national prosperity depends on those corporate financial objectives of the company is to maximize within socially acceptable limits profit from the use of funds employed by them. The maximization of profit within socially acceptable limit implies that a proper regard to public intersect has been paid. No company can survive long without profit: profit is the ultimate measure of its effectiveness and in a capitalized society. There is no future for a private enterprise which always increased loses. The survival measure of the effective performance of a business is a profit which really is a measure of how well a business performs economically. Profit is a signal for the allocation of resources and a yardstick for judging managerial efficiency. Profit is a primary objective of a business in view of the heavy investment which is necessary for the success of most enterprise. Profit in the accounting sense ted s to become a long term objective which measures not only the success of product but also the development of market of it . (Kulkarni,1985; 245)

According to the economist perception some economist says that profit is a rent of ability. Some says profit as reward for risk bearing of business. It is also said that profit is return to uncertainty bearing and it is also reward for innovation. Innovations are those new products of process which increases national income more than they increases national cost.(Reeki,198:380)

In the opinion of Myers john N, profit is the dominant goal in business and profit making should be the main objective in terms of which the general effectiveness of organization is measured. In other words, profit is obtained by subtracting the cost from revenue profit is the reward of the entrepreneur rather of the entrepreneurial functions.

Profit differs from the return on other factors in three respects;

- Profit is residual income and not contractual or certain income as in the case of others factors.
- There is much greater fluctuation in profit than the reward of the other factors.
- Profit may be negative but rent , wages and interest much be always being positive.(modern economic theory,1981:299)

Dean Joeal clearly distinguishes the views of accountant and economist about profit as following point. The most important point of different between economist and accountant approaches is:

- The business of cost i.e. what should be subtracted from revenue to get profit.
- The meaning of depreciation
- The price level basis for valuation of assets
- The treatment of capital gains and losses and perhaps most important.(Dean Joeal 2007:256)

  The term profit in views from management as follows:
- An intangible expression of the goals it has set for the firm.
- A measure of the performance towards the achievement of its goals.
- A means of maintaining the health growth and continuity of the company. (Williams,1988:245)

2.1.2 Planning

Planning is the first essence of management and all other function is performing within the framework of planning. Planning means deciding in advance, what is to be done in future? Planning starts from forecasting and pre determination of future events. Planning is the whole concept of any business organization. No firm can achieve its pre determined goals and objectives in the absence of proper plan. Hence it is life blood of any organization which makes efficiently run towards the competitive environment.

Planning is also aimed at giving shape to the future. It is a basic function of management. It may be defined as the selection from among the alternative of courses for future actions. It is functioned by the managers decided what goes out to be accomplished and how they are to be reached.

The planning process which involves both short and long term is the most crucial components of the whole system. it is both foundation and the bond for the other elements because it is through the planning process that we determine what we are going to do. How we are going to do it and who is going to do it. It operates as the brain centre of an organization

Profit don't just fall, it should be properly planned. In other words, profit isn't matter of changes. It comes from effective and realistic plan. Planning is the process of developing enterprises objectives and selecting future course of action to accomplish them. It is the methods thinking about acts and purpose before planning starts comes forecasting and determination of future events. It is the first essence of management and all other functions are performs within the framework of planning. So, planning is the basic foundation of profit plans. Planning assesses the future makes provision for it and assumes the achievements of pre defined goals. Simply the planning means the determination of any works in advance of actions. Basically it is a decision making process that provides a base for economic and effective future course of action.

Planning means a assessing the future making provision for it and assuring that establishing goal can be met with acceptable home frame. Define the planning it simplest term as determination of anything in advance of action. It is essentially a decision making process that provide a basis for economical and effective action in the future. Effective planning sets the stage for integrated action to take place, reduce the number of enforceable crisis promotes to use of more efficient methods and provides the basis for the managerial function of control. (filppo, sixth editon 49)

Planning is the basic foundation of profit planning and a plan is a projected course of action .planning is a technique whereby the use pattern of resources is carried out.(Agrawal,1989:348)

A planning process includes goal setting resource evaluating forecasting by different methods and formulating a master plan. Planning depends upon the organized objectives for the planning purpose, a firms objective can distinguish mainly three types prime, instrumental and specific. The prime objective is to complete the action. Instrumental objectives are for accomplishment of divisional and individual goal. Specific objectives are those objectives that have been specified as to time and magnitude. Which are known as organizational goals? Therefore, company objective are the base for long range profit planning. Planning is the conscious recognition of the future of present decision .Planning is the feed forward process to reduce uncertainty about future. So planning is an intellectual process, rational way a systematic way and the goal oriented task. Primary function of management and planning provides all managerial activities and it is directed towards efficiency. (welsch.1992:3)

2.1.3 Profit planning

Profit planning is the primary function of management in any organization. A company always wants to earn maximum profit through the optimum utilization of available resources. Profit planning measure the success of any organization. Various budgets are major elements of profit planning .it is a key which helps to predict the future minimize risks estimate output from the scarce resources and helps for various managerial decision making processes.

A profit plan is estimation and determination of revenues and expenses that evaluates how much income will be generated in order to meet the financial requirements. It presents a plan for spending income for profit generation. It represents an overall plan of operations for definite period of time and formulates the planning decision of the management. Profit planning is therefore a fundamental part of the overall management functions and is a vital part of the total budgeting process. The management determines the profit goals and prepares budgets that will lead them to the realization of these goals. Profit planning can be only when the management has the information about the cost of the products both fixed and variables and the selling price at which it will be in a position to sell the products of the company. (maheshwari 2000:171)

Profit planning is planning for future operation in such a way as to maximize the profit or to maintain a specified level of profit. A comprehensive profit planning is also known as broad budgeting schedule developed in financial statements .Profit planning deals with the development of objective. Specification is of short term goals. Developments of strategic and tactical profit plan. In other word, profit plan is a detail expression of the expected result from the planning decisions. Profit planning is an important approach developed to facilitate for effective performance of management process like as planning organizing, staffing controlling etc. therefore, profit planning carry out the veil is the precise measurement of operation in terms of quantity (i.e. the matters of profit planning are expressed in numerical value).

Profit planning is a comprehensive statement of intentions expressed in financial terms for both short and long term operation of the firm. It is a plan for the accomplishment of organizational expectations. It is a base for measuring the variation between planned and actual performance. The success of each organization will be determined by reaching or exceeding those targeted plans. Profit planning is one of the comprehensive approaches that have been developed to facilities effective performance of the management process. It is a systematic and formalized approach for performing significant phases of management planning and control function. In includes following activities:

- Development and application of broad and long term objectives of organization.
- Specification of organization goals.
- Development of long run profit plan in broad terms.

- Development of short run profit plan detailed by assigned responsibilities.
- System of periodical performance report detailed by assigned responsibilities.
- Flow up the procedure.

The main aim of profit planning is to forecast about future. So, it plays the vital role in the development of organization. It is the most important tool in the field of managerial decision making in the enterprises. Main propose of profit planning and control are as follows.(welsch,1992:44)

- To state the firms expectations (goals) in clearly format terms to avoid confusion and facilitate their attainability.
- To communicate expectation to all concerned with management of the firms so that they are understand, supported and implemented.
- To avoid a detailed plan of action for reducing uncertainty and for its proper direction of individual and group efforts to achieve goals.

Profit planning is a part of an overall planning process and in an area in which finance function play a major roles. The success of each enterprise in realizing its optimum profit in each year will be determined by the extent to which it establishes develops co-ordinate plans to meet those objective and exercise control of all facts of its activity so as to have actual results reach or exceed those planned. This entire process constitutes the further stated that profit planning and control has the ultimate objective of attaining the optimum profit. (kellen. isal woyne and ferrera,1999:388)

Neil w. chambrlin describes in his research that profit planning and control refer to the organization techniques and procedures where by long and short range plans are formulated considered &approved. A profit plan is an advance decision of expected achievement based on the most efficient operating standards in effect or in prospect at the time it is established against which actual accomplishment is regularly compared in short. It provides a tool for more effective of individual operations and practical administration of the business as a whole.

Matz and Milton described the profit planning is a well throughout operational plan with its financial implication expressed at both long and short range profit plans and budget in the form of financial statements including balance sheets, income statement and cash flow statement and working capital projection.

Estimation and pre- determination of revenues and expenses that estimate how much income will be generated and how it should be spent in order to meet investment and profit requirements".

2.2 Cost volume-profit Analysis as a tool of profit planning and control

Cost-volume profit analysis examines the behavior of total revenues, total costs and operating income as change occurred in the output level, the selling price, the variable cost per unit and fixed costs of a product (horngreen,et.al.,1999:256)

Cost volume profit analysis is a systematic method of examining the relationship between change in activity (i.e. output) and change in total sales revenue, expenses and net profit. As a model of their relationship CVP analysis simplifies the real world condition that a firm will face like most model, which are abstraction from reality, CVP analysis is subject to a number of underlying assumptions and limitation. Never the less it is a powerful tool for decision making in certain situations (Drury, 2000:287)

Most of the businesses fail after a few years, sometimes months, of starting because they tend to do anything for volume without thinking how it going to affect bottom line. Cost-Volume –Profit analysis is a management accounting tool to show the relationship between the elements of profit planning. Profit planning is the function of the selling price of the product, demand, variable costs, fixed costs, taxes etc. the whole picture of profit planning is associated with cost volume profit relationship (Bajracharya, et.al.,2004:225)

CVP analysis is an important media through which is the management can have an insight into effects on profit on account of variation in cost and sales and take appropriate decisions. Profit planning can be done only when the management has the information about the cost of the product and selling price of the product.

The key motive of business enterprises is to make and maximize profit. Profit doesn't happen by chance. It is to be managed. CVP is a supplementary tool of planning of profit. It is immensely helpful for developing alternative strategies in sales planning and cost estimation.CPV is an accounting technique showing the relationship between the above mentioned variables. This technique is equally important in profit making and nonprofit making organization.

Cost-Volume-Profit analysis is a management accounting tool to show the function of selling price of the product, the variable costs and volume to be sold. The entire scope of profit planning associated with CVP interrelationship. A widely used technique to study CVP relationship is break even analysis. Break even analysis is concerned with the study of revenues and costs in relation to sales at which the firms revenue and total costs will be exactly equal (or net income is zero). Thus the BEP may be defined a point at which the firms total revenues are exactly equal to total costs yielding zero income. The ‘no profit’, ‘no loss, is a breakeven point or a point at which losses ceases and profit begins (Khan & Jain, 1993:265).

Cost-volume- profit analysis can be regarded as a sophisticated method or analytical tool used in management. It is extremely useful in profit planning and control, management decision, cost control, budgeting etc.

2.3 Concept of Cost volume profit Analysis

CVP analysis is an analytical tool for analyzing the relationship among cost, price, profit, sales and production volume, Mainly, there are three elements in CVP analysis. They are cost, sales or production volume and profit. All these terms are interconnected and dependent on one another. For instant, profit per unit of a product depends on its selling prices and cost and sales. The selling prices to a greater extent will depend on the cost and costs depend on the volume of production. It is highly essential for the management to have the complete knowledge about the interrelationship among the cost, volume and profit. A study concerning this interconnection is undertaken through cost- volume profit analysis.

CVP analysis is a supplementary tool of profit planning. It tells many things about the relationship between the business variables. Total variables costs are proportionate to the sales volume where as the total fixed costs remain unchanged within the relevant range of the output levels .that is why net income are not in proportion to sales. Knowing the relationship, one can assess the profit at forecasted sales volume likewise required sales can be ascertained for the minimum level of profit. If a company sales more than one product, called the product mix, is product may not be equally profitable so the company's profit will depend upon the ratio of each products sell on the total sales revenues. Profit will be greater if high margin items make up a relatively large proportion of total sales than if sales consist mostly of low margin items. Changes in sales mix can cause great variations in a company’s profit. A shift to low- margin items can cause the total profit to decrease even though total sales increase. On the contrary, a shift in the sales mix from low-items to high margin items can cause the reverse effect; total profit may increase even though total sales decrease.

Thus- C-V-P analysis is the technique of summarizing the effects of changes in an organizations volume of activity on its cost, revenue and profit. Cost volume profit analysis applies marginal or variable costing principle while establishing the effect of the future course of activities on the financial results of the firm. Knowledge of how cost behaves in response to change in volume and how profit beaver in response to change in cost and volume helps management to make numerous short term optimal decisions relating cost control and profit maximization.

2.4 Cost and its classification

Concept of cost

Sacrifice or foregoing of resource made for the attainment of specific purpose is known as cost and are measured in monetary terms. Cost are collected, classified, determined, analyzed and controlled keeping in view the very purpose for which it has been incurred. Cost must be paid for production or purchase of goods and services. Usually costs are incurred with a view to obtained more return or resources in future. Immediate effect of cost is that it cause decrease in assets or increase in liabilities.

Classification of costs

Cost classification is the process of grouping costs according to their characteristic. In other words, it is the placement of like items together by virtue of their common features. Though costs are identified with cost units, cost centers or cost objective in general, the same figures can be classified differently depending upon the very purpose or specific requirement of the management. Cost classification not only helps management in determining product cost for stock valuation and profit measurement but also helps in decision making planning and control.

Behavior wise classification of cost

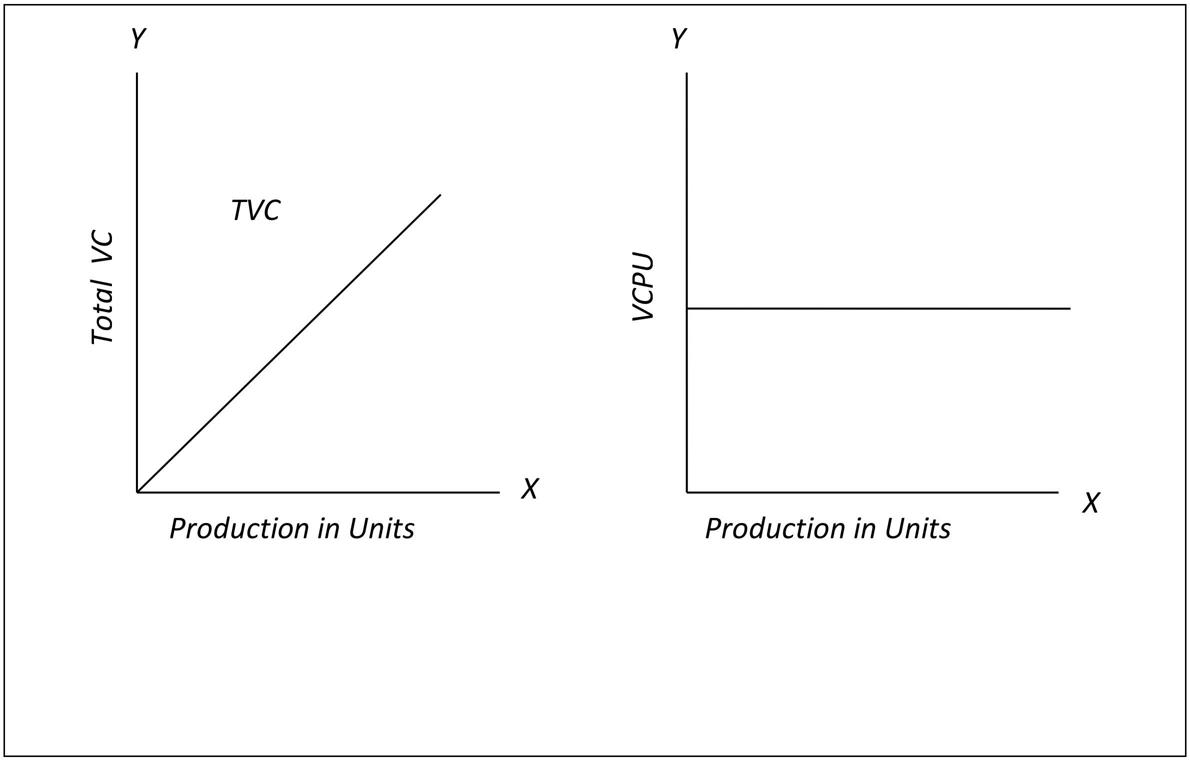
All costs do not show the same behavior throughout the operation. There exists a relationship between costs and volume of activity. Cost behavior implies the relationship between costs and volume of activity. In most of the organizations, costs can be classified as variables, fixed and mixed as these behave in relation to activity volume.

Variable cost

These costs tend to very in direct proportion to the volume of output. In other words when volume of output decreases, total variable cost also decrease. But the variable cost per unit remains fixed. It includes direct materials, direct wages, power, royalties, normal spoilage, small tools, and commission of salesman, etc. it can be shown in the figure below.

Figure 2.1

Variable Cost

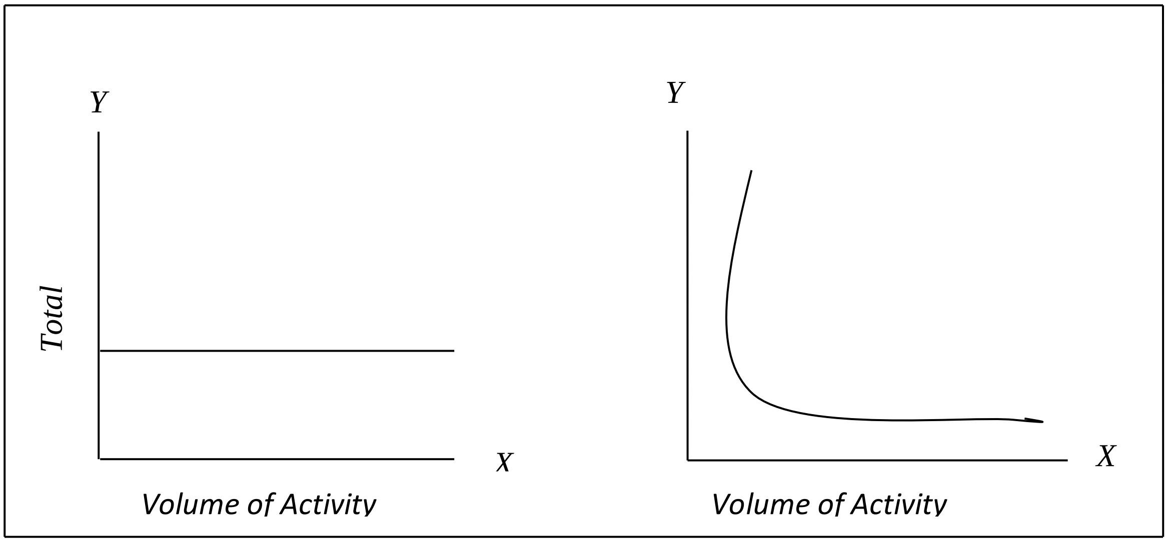


Fixed cost

These costs remain fixed in total amount and do not increase or decrease when the volume of production change. But the fixed cost per unit increases when volume of production decreases and vice versa. Fixed cost per unit decrease when volume of production increase. It includes rent and leaser, municipal tax, managerial salaries, building insurance, salaries and wages of permanent staffs etc. it can be shown in the figure below.

Figure 2.2

Fixed Costs

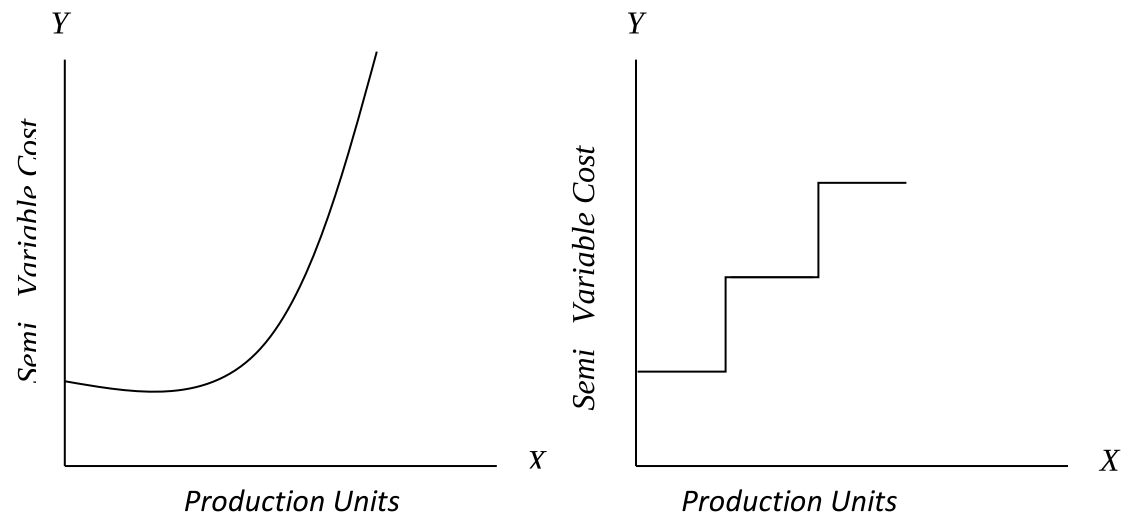


Mixed costs

These are partly fixed and partly semi variable costs has often a fixed element below which it will not fall at any level of output. The variable elements in semi variable costs change either at a constant rate or in lumps. For example, introduction of an additional shift in the factory will require additional superv Y ınd certain cost will increase in lumps. In the case of telephone, this is a minimum charge and after a specified number of causes, the charges are made according to the number of calls made. Thus there is no fixed pattern of behavior of semi variable cost. It includes supervision light and power, telephone expenses, maintenance and repair, depreciation, compensation for accidents etc. semi variable cost can be shown in the below.

Figure 2.3

Semi Variable and Mix



Segregation of semi variable cost

the semi variable cost can be divided in two parts-fixed and variable cost the division of cost in to fixed and variable cost is known as segregation of fixed and variable cost is known segregation of cost. There are many method of separating semi variable cost in to fixe d and variable cost. The main two methods are as follows:

a) High-low method
b) Least square method

a. High-low method

This method assumed that the change in semi variable or semi fixed or mixed cost is caused by variation in output or activity.

The following steps should be followed for segregation of semi variable or mixed cost under high low method.

Step 1 To elect highest and lowest level of activity

Step 1To take the corresponding cost of highest and level of activity.

Step 3To find out the different between highest and lowest points and ascertains the variable cost per unit by using following formula

$$\text{Variable cost per unit (b)} = \frac{\text{High units –low units}}{\text{High units –low units}}$$

Step 4To find out the fixed cost by using the following equation:

Fixed cost= Total cost-(variable cost per unit*Activity level)

Least Square Method

Least square method is a statistical method. It is an accurate and trusted method of segregation fixed and variable cost from mixed cost. In this method, first of all, variable cost per unit is calculated. After this, the fixed cost is calculated. The fixed cost and variable cost can be separated by adopting the stepwise process as shown below.

Step 1 Assume the activity level or production units as ‘x’ and find out the summation of x i.e. $\sum X$.

Step 2 Assume the mixed cost as 'y' and find out $\sum Y$

Step 3 Multiply X and Y and sum the product i.e. find out $\sum xy$

Step 4 Convert x in to x^2 and fine out the sum of x^2 i.e. $\sum x^2$

Step 5 Using the following given below, fine out unit variable cost (b)

$$= \frac{N \sum XY - \sum X . \sum Y}{[N \sum x^2 - (\sum x)^2]}$$

Step 6 using the formula given below find out fixed cost (a): a = $\frac{\sum Y - b \sum X)}{N}$

1. N= Number of Observations

2. For finding out the value of 'a' following formula could be used:

$$a = \frac{\sum x^2 . \sum Y - \sum X . \sum Y}{N \sum x^2 - (\sum X)^2]}$$

Approaches to Cost – Volume – Pro fit Analysis

The CVP relationship can be analyzed through difference approaches, which are :

1 contribution margin approach

2 cost and revenue equation approach

3 graphic break even approach

2.5 Contribution Margin Approach

The profit of a business enterprise is indicated by contribution margin approach. It high lights the relationship among cost, sales and profit. Contribution margin is the excess of sales prices of a unit of output over its variable cost. Contribution margin enables to meet fixed costs and add to the profit. The total fixed costs are covered by it and the balance amount is an additional to the net profit. Contribution margin can be represented as :

i. Contribution margin= Sales –Variable Cost
ii. Contribution margin= Fixed cost + profit
iii. Profit= Contribution margin –fixed Cost

Contribution Margin Ratio

Contribution margin ratio expresses the relationship of contribution to sales. It is also termed as profit volume ratio, contribution sales or variable profit ratio if the contribution margin is divided by sales revenue, the result is profit volume ratio. Symbolically, it is

P|V Ratio=C|S

Where,

C= contribution margin and

S= sales

Profit volume ratio can be calculated in the following ways too:

i. P|V Ratio= $\frac{\text{Fixed cost + profit}}{\text{Sales}}$

ii. P|V Ratio= $\frac{\text{Sales – Va riable Cost}}{\text{Sales}}$

iii. P|V Ratio= $1 - \frac{\text{Variable Cost}}{\text{Sales}}$

iv. P|V Ratio=$\frac{\text{Different in Profit of Two Periods}}{\text{Different in sales of Two Periods}}$

2.6Uses of profit – Volume Ratio

Profit volume ratio can be taken as a significant evaluation tool on earning of business enterprise. The earning capacity of enterprises can be measured by the profit –volume ratio. The higher profit volume ratio reflects the firms ability for increasing profitability.

The profit volume ratio is used to determine the following facts;

I) Determination of selling price

Selling price can be determined with the help of profit volume ratio. In order to fix the selling price, it is essential to know about the fixed cost, variable cost and budgeted profit .Beside production volume is also required to be fixed. The selling price can be determined by using following formula

$$\text{Selling price per unit}=\frac{\text{Contribution Margin}}{\text{P/V Ratio}\times\text{Sales Unit}}$$

$$\text{Selling price per unit}=\frac{\text{Variable Cost Per Unit}}{1-\text{P/V Ratio}}$$

ii) Ascertainment of profit at a budget sales volume

The profit can be determined with the help of margin ratio. For this purpose, the following elements should be determined before hand;

1. Sales Amount
2. Variable cost
3. Fixed cost

The following formula used to ascertain the profit

Profit=(sales× P|V ratio- Fixed cost)

iii) Ascertainment on price selling Profit

Profit volume ratio can be used for finding out the profit on selling price. For this purpose, the following formula is used;

Profit= Sales Units after break even sales × Unit Selling Price ×P|V ratio

iv) Determination of profit on cost

Profit can be determined on the basis of variables cost and sales with the help of profit-volume ratio. In order to ascertained the profit, the following formula used;

$$\text{profit per unit} = \frac{\text{VCPU} \times \text{P/V Ratio}}{\text{V/S Ratio}}$$

where,

V|S ratio= 1- P\V ratio

The formula ascertained the profit per unit for the sales after break even .(Dangol, 2008:421)

2.7 **Cost and Revenue Equation Approach**

The cost and revenue equation approach is based on the income statement concept. It represents the most convenient and accurate approach to cost volume profit analysis. The various formulations in CVP are derived from the revenue and cost function. The relationship between cost, volume and profit can be expressed algebraically as;

Profit= Total Revenue –Total Cost

Total revenue and total cost are affected by sales volume. The addition of quality in above equation will provide useful information for knowing the effect of revenue, cost and volume as operating profits. When the quantity is included in the above equation, it is algebraic form will be as follows.

Profit= total Revenue –Total variable cost-Fixed cost

Or,

Profit=(Unit Selling Price× Sales Unit)-(Unit Variable Cost ×Sales units)-Fixed Cost

Or, $P=(S\times Q)-(V\times Q)-FC$

Or, $P=Q(S-V)-FC$

Where,

P=Profits

Q= Sales units

S= Unit Selling Price

V= Unit variable Cost

FC= Fixed cost

2.8 Break Even Analysis

The relations among cost, volume and profit can be found out clearly through break even analysis. Break-even analysis is regarded as a sophisticated method or tool used in management. It is the most widely known form of cost- volume analysis. So these two terms are used interchangeably.

The break- even point used under break-even analysis. Break even point is the level of activity where total cost is equal to total sales. It is a specific level of activity or volumes of sales, which breaks the revenues and costs evenly. It is point of “no Profit ,no loss”. If the sale or production is higher than break even volume, there will be profit. In the same way if the sale is less than break even sales, there will be a loss.

Computation of Break- even Point

Break-even point can be determined by following method

a) Algebraic or Formula Method

Break even can be determined by the use of formula. It is also termed as algebraic method. According to the definition of breakeven point, it is such a level of sale or activity, where there is neither profit, nor loss. It is that level of sales, where total cost is equal to total sales revenue. It can be presented in equation forms in the following way.

Sales Revenue = total cost

Or,

Sales revenue = fixed Cost +Variable Cost

For finding out sales revenue, we have,

Sales Revenue = Selling price per unit× Sales unit

Symbolically,

Sales Revenue = $S \times Q$

For finding out, Total Cost, we have

Total cost= Fixed cost+(Variable Cost per unit ×Sales unit)

Symbolically,

Total cost = $FC+(V+Q)$

From the early definition, we have,

Sales Revenue= Total Cost

i .e. $S \times Q = FC + (V \times Q)$

Or $(S \times Q)-(V \times Q)=FC$

Or $Q(S-V)=FC$

$$Q = \frac{FC}{(S-V)}$$

Where,

Q= Break-even point in units

FC=Fixed cost

S= Selling price per unit

V= Variable cost Per unit

b) Graphic or chart Method

A break even chart is used to graphically depict the relationship among revenue variable cost and profit (or losses). The no profit, no loss point (the breakeven point) is located at the point where the total cost and total revenue lines cross. Below this point the firm losses, and above this point, the firms earns profit(Bajarchaarya,et.al.,2004:231-232).

In the graph given below the fixed costs remain constant without the relevant range: the fixed cost curve is parallel to ‘OX’ axis. Variable cost slope downward from the origin to right but the slope depends on variable cost ratio. The fixed costs curve parallels the variable cost curve. So the angle ‘0’ equals the angle ’V’ it is because total cost = total fixed cost plus total variable costs at volume ‘Q’.

Total Costs =TFC+Q×VCPU

Total Cost=TFC+(Q+n)×VCPU

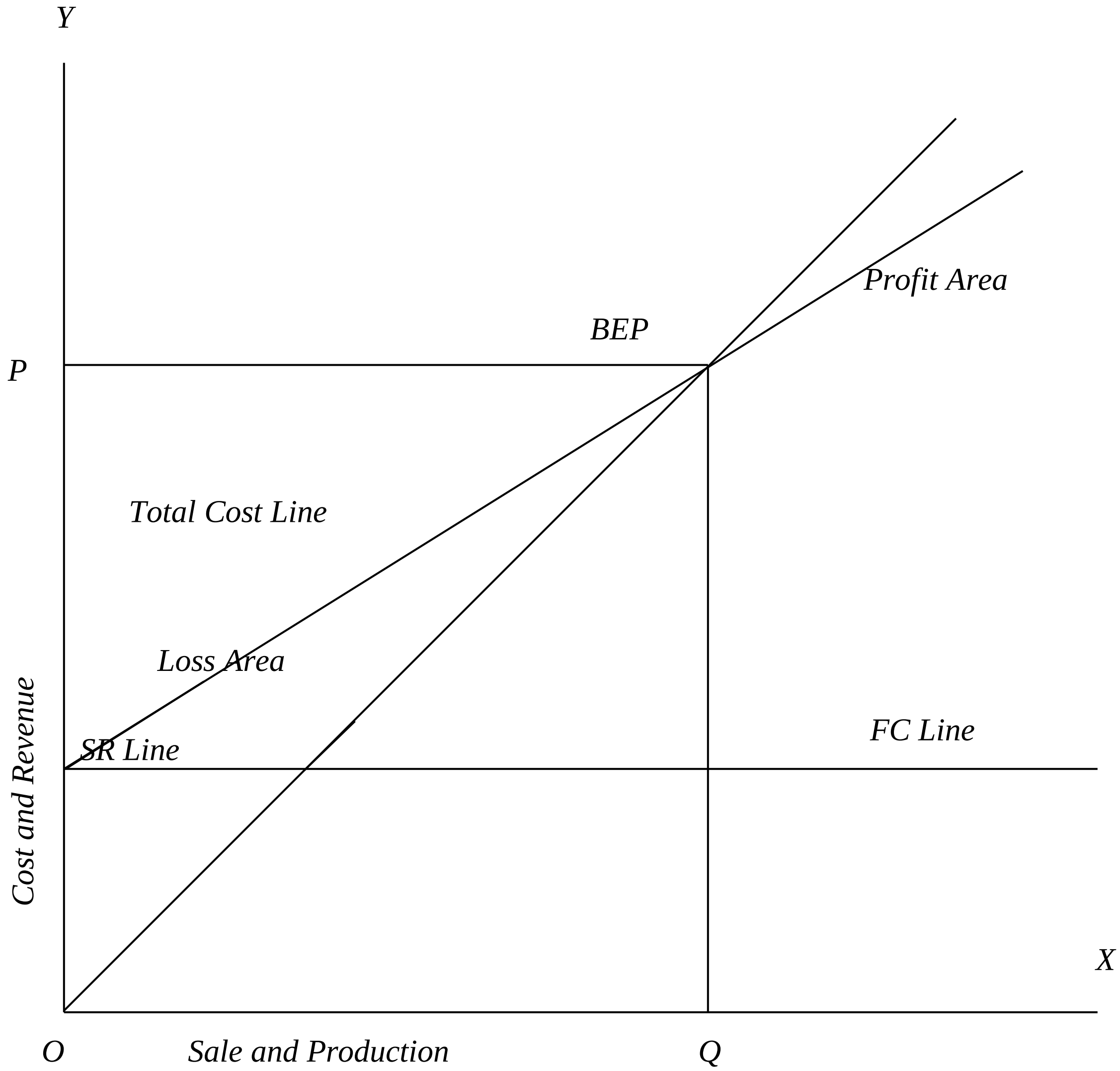
Δ Total Cost= O+N×VCPU

Δ Total Cost= Δ Variable Costs

That’s why the slope of the total cost curve equals the slope of variable cost curve.

Figure 2.4

Graphic approach to CVP



The above graph clearly shows that if the company can reach the point of BEP it can generate sufficient revenues to cover all its operating expenses. At this points, the total revenues equal the total cost. Here, the revenue breaks up (intersect) the total cost curve that's why this point is called Brea even point. In short, Break Even point is that point where,

Total sales revenues = Total costs

Application of break even analysis

Break Even concept can be used to formulate different policies in a business enterprise. Some of these applications are (Maheshwari,2000 : 182)

- Determination of profit at different levels of sales and margin of safety.
- To find the level of output to get the desired profit.
- Effect of price reduction on sales volume and changes in sales mix.
- Effect of fixed cost or variable cost changes on sales volume.
- Selection of most profitable alternative, make or buy decisions and drop or add decisions.

Assumption of break Even analysis

Contribution analysis and break even analysis are based on a specific set of assumptions that should be clearly under stood. These underlying assumptions are(Maheshwari, 2000: 182-183)

- All cost can be classified into two parts, fixed cost and variable cost. There is no cost other than fixed and variable.
- There is a range of validity (activity)for using the results of the analysis and sales prices doesn't change as units of sales change.
- There is only one product or in case of multiple products, the sales mix among the product remain constant.
- Basic management policy about operation will not change materially in short run.
- The general price level (inflation\deflation) will remain essentially stable in the short run .

- Sales and production levels are synchronized, that is inventory remains essentially constant or zero.
- Efficiency and productivity per person will remains essentially unchanged in the short run.

If any of the above assumptions were changed, revised budget would be needed for a new analysis.

Limitations of Break Even Analysis

Break- even analysis in many businesses situations can be used for effective decision making, but there is many shortcoming or limitations in its analysis and interpretations. Some of these can be listed as (Maheshwari 2000:184)

- The assumptions of producer's market phenomenon not hold good for all types of commodities.
- The fixed costs may not remain constant as well as the variable costs may not vary in fixed proportions at different levels of output.
- With variation of the prices of the items or services, which also depend on the factors affecting its demand and supply will certainly affect the demand of the commodity. This phenomenon is not covered in Break even analysis .
- Identification of fixed and variable costs involved in production process is very complicated. A shift in product mix may change the breakeven point.
- Customers may be given certain discount on purchase to promote sales. This revenue may not be perfectly variable with level of sales output.

Other Use of Break Even Analysis

Break even analysis can be used in a changed situation in different cases and formula are given below.

1. Required Sales for Desired Profit (in units)= $\frac{\text{FC + Desired Profit}}{\text{CMPU}}$
2. Required Sales for Desired Profit(in Rs)= $\frac{\text{FC + Desired Profit}}{\text{CM Ratio}}$
3. Required sales in units for DAPT=$\frac{\text{FC}+\frac{\text{DPAT}}{(1-\text{T})}}{\text{CMPU}}$
4. Required sales in RS for DAPT = $\frac{\text{FC}+\frac{\text{DPAT}}{(1-\text{T})}}{\text{CM Ratio}}$
5. Required sales volume for change on selling price

   Revised BEP in this= $\frac{\textit{Fixed Cost}}{\textit{Revised Unit Contribution Maragin}}$

   Revised Break even point in Rs = $\frac{\textit{Fixed Cost}}{\textit{Revised PV Ratio}}$
6. Required sales Volume for Changes in Selling Prices:

   Revised Unit Contribution Margin =

   $\frac{\textit{Fixed Cost}}{\textit{Rev ised Unit Contribution Margin}}$

   Revised Breakeven Point in Units=
7. Required Sales Volume for Changes in fixed Cost

   New Break Even point=

   $\frac{\textit{Fixed Cost Present + Additional Fixed Cost}}{\textit{Unit Contribution Margin}}$

break-even sales volume in the presence of step or moving fixed cost

Determination of breakeven sales volume, so far, was based on the very assumption that the times of fixed costs will remain stable over a broad, relevant range of normal operating volume. But it may not be so. Though some items of fix cost such as depreciation and rent may remain consent but other items such as supervision, repairs and maintenance may change various items between the capacity volume and relevant range of normal operating volume. Calculation of breakeven volume in the presence of such step or moving fixed cost items requires more homework.

A process of trial and error or resort to specific steps helps to overcome such a problem. The point to note here is, we are concerned with the most earlier breakeven sales volume as there are numerous breakeven volumes increasing each time with every increase in step or moving fixed cost (waggle & Dahal,2004:4.7)

2.9 Cost-Volume-Profit analysis for a multi product firm

The relative proportion of sales of product is called the sales mix or the product mix. In the case of multi product firm, the contribution for each product can be found out by deduction its variable cost firm sale revenue. The breakeven point for each product can be calculated only if the total fixed costs of the firm are distributed and fixed cost for each product for each product is known. The firms overall break-even can be calculated by dividing the total fixed cost by the contribution ratio for the film. The multi-product firms PV ratio will be weighted average of the PV ratios for the entire product, the weights being the relative proportion of each product's each product's sales. The PV ratio for the multi-product firms can also be calculated by dividing the total contribution from all products by total sales.

A change in the product mix will not affect the firm's break-even point and profit if each product has the same PV ratio. However a change in the product mix will change the break-even point and profit when products have unequal PV ratios (Maheshwari, 2000:184).

2.10 **Break-Even Point of Multi Company/Firm -Product**

In multi-product firm have to calculate the BEP in aggregate. The sales mix is used to compute a weighted average unit contribution. This is the average of the several product unit contribution margin weighted by the relative sales proportion of each product.

Following Procedures are followed to calculate BEP for max sales mix or multi-product.

- Calculate contribution margin or profit –volume ration for each product.
- Calculate proportion of sales max in unites or values as follows.

$$\text{Sales Mix}= \frac{\textit{Individual Product's Sales Units or Value}}{\textit{Total of Product's Sales Units or Value}}$$

- Calculate weighted average for all products as follows:
  Weighted average=$\sum$ Sales Mix $\times$CMPU
  Weighted CM Ratio= $\sum$ Sales Mix (Value) $\times$P/V ratio

- Calculate Break-Even Point (BEP):

Break-Even Point= $\frac{Total\ Fixed\ Cost}{Weighted\ CMPU}$

Some Important Formulas

1. Overall BEP (in Units)= $\frac{Total\ Fixed\ Cost}{Weighted\ CMPU}$

2. Overall BEP in Rs.= $\frac{Total\ Fixed\ Cost}{Weighted\ CM\ Ratio}$

3. Required Sales for desired profit (in units)= $\frac{FC\ +\ Desired\ Profit}{Weighted\ CMPU}$

4. Required Sales for DP (in Rs.)= $\frac{FC\ +\ Desired\ Profit}{Weighted\ CM\ Ratio}$

5. Required Sales for DP After Tax (in Rs.)= $\frac{FC + \frac{DPAT}{(1-T)}}{Weighted\ CM\ Ratio}$

Required Sales for DP After Tax (in Rs.)= $\frac{FC + \frac{DPAT}{(1-T)}}{Weighted\ CM\ Ratio}$

2.11 Margin of Safety

Margin of safety is the excess of the budgeted or actual sales over the break even sales volume. In other words, it is the difference between the budgeted or actual sales revenue and the break even sales revenue. It is the position above the break-even point. It gives management a feel for how close projected operations are to be organizations break-even point. Managers often consider the size of the company's margin of safety when making decisions about various business opportunities. The larger is the safety margin, the greater is the chance for the company to earn profit (i.e. larger the margin of safety, Safer the company). A high margin of safety is particularly significant in times of depression when the demand if the company's or firm's product is falling. A low margin of Safety Company's or firms which has a low contribution ratio. When both the margin of safety and the PV ratio are low, management should think of the possibilities of increasing the selling price, provided it doesn't adversely affect the sales volume or reducing variable costs by bringing improvement in the manufacturing process. Margin of Safety can be ascertained by using the following formula (Manunkarmi, 2003:127).

Margin of Safety=(Actual Sales Value- Break-even sales value)

$$= \frac{Profit}{Pro\ fit\ Volume\ Ratio} \text{ in Amount}$$

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

The relation between of safety and actual sales is known as margin of safety ratio, which is determined as follows (Munanakarmi, 2003:127).

$$\text{Margin of Safety Ratio} = \frac{Actual\ Sales - Breakeven\ Sales}{Actual\ Sales} \text{ in units}$$

The following steps are needed to rectify margin of safety.

- With increasing selling price.
- With increasing sales volume, if the capacity of fixed cost is not fully utilized.
- With reducing fixed cost if possible.

- With reducing variable cost (with redacting the cost of raw material, wages and other direct cost).
- With substituting product line by more profitable one.

2.12 **Costs-Volume Profit Analysis and Limiting Factors**

CVP analysis is helpful in profit planning and a company will be able to produce any number of output, numbers of output of its choice (desires). But in real world it is not possible, become of some critical factors like finishing machine or raw material or labor. These critical factors in the CVP analysis are known as constraint.

2.13 **CVP Analysis with a Single Constraint**

Scarce resource should be efficiently allocated in order to maximize the contribution margin. A particular simple and instructive situation arises when there is only ion e constraining resource. This can occur if the firm's products are all produced on a single maintained and outer is imagery available on this machine. In the same way, single resource constraint arise, if the firms product are all produced with only one material and output is limited by quantity available for that to have alternative uses, the contribution per unit should be calculated for each of these uses. Then, the available capacity for such scarce resources should be allocated to the alternative uses on the basis of contribution per scarce resource (Munankarmi, 2003:146).

2.14 **CVP Analysis with a Multiple Constraints**

Where more than one scarce resource exists, the optimum production program cannot easily be establisher the simple process applied in single resource constraints. Under the circumstances, simple allocation of resources or the basis of contribution margin per unit is neither feasible nor desirable. Contribution per unit of scarce resources may be different for different scarce resources may be the ranking of product, because production processes are affected by many constraints factored rather than single constraint. In such situations, linear programming technique may be used to optimize product mix. The linear programming formulation is required to determine a production plan that maximizes contribution from the product mix. Linear Programming is a mathematical technique which shows how to arrive at the optimum results allocation of liable with a problem of allocating limit resource among competitive activities in an optimum manner. It is a technique to optimize the allocation of scarce resources in product mix problems which provides a valuable extension to cost-volume profit analyses(Munankarmi, 2003:148).

2.15 CVP and Leverage

Operating leverage is a measures of the extent to which fixed costs are being used in organization. The relationship is if a company's variable and fixed cost is reflected in its operating leverage. Generally highly labor intensive organization have high variable cost and low fixed cost and this has low operating leverage and a reactively low break -even point. Conversely, organization that are highly capital intensive have a cost structures that includes low variable and high fixed cost which reflects high operating leverage with high break- even point. It shows that fixed costs and operating leverage has direct relationship. Higher the amount of fixed costs higher the operating leverage and breaks even point and vice versa. In other words, the firms with relatively high operating leverage have proportionally high filed expenses; the firm's break-even point will be relatively high. The operating leverage factor is determined as under (Munankarmi, 2003:145)

$$\text{Degree of Operating leverage} = \frac{\textit{Contribution Margin}}{\textit{Net Income}}$$

2.16 **Assumptions Underlying CVP Analysis**

Break even analysis is the most useful technique of profit planning and control. It is a device to explain the relationship between cost volume and profit. The discussing of the CVP analysis (or break even analysis) so far is based on the following assumptions (Pandey, 1999:241).

- **Cost segregation**

The total cost can be separate in to fixed and variable components. Constant fixed cost is the total fixed cost that remains unchanged with changes in sales volume. Constant unit variable cost is the variable cost per unit is constant and total variable cost changes in directive proportion to the sales volume.

- **Constant Selling Price**

The selling price per unit remains the constant; that is it done not change with volume or because of other factors.

- **Constant Sales Mix**

The firm manufacturers only one product or if there are multiple product the sales mix does not change.

- **Synchronized Production and sales**

Production and sale saner synchronized that is inventories remain the same.

2.17 **Limitation of CVP Analysis**

Assumption limits the utility and general applicability of the CVP analysis. Therefore, the analysis should recognize these limitations and adjustment data, wherever possible, to get meaningful results. The CVP analysis suffers from the following limitations (Pandey, 1999:214).

- It is difficult to separate costs in to fixed and variable components.
- It is not correct to assume that total fixed cost would remain unchanged over the entire range of volume.
- It is difficult to use the break-even analysis for a multi produced firm.
- The break even analysis is a short run concept and has a limited use in long range planning.
- The break even analysis is a static tool.

2.18 Purpose of CVP Analysis

Cost-Volume-Profit Analysis helps management in a number of ways. The following purposes are served by it: (Dangol & Dangol, 2004:160).

- Resulting Calculation of profit resulting from a budgeted sales volume.
- Calculation of sales volume to break-even.
- Calculation of sales volume to produce desired profit.
- Effect or changes on price, costs and profits.

- Determinations of new break-even point for changing in cost and selling price.
- Measurement of effect of changes in profit factors.
- Choosing the most profitable alternatives.
- Determining the optimum sales mix.
- Determination of capacity and equipment selection.
- Long- term decision on continuance of products.
- Make or buy decisions on sub- assemble or part.
- To contemplate the increase or decrease in profit due to change in method of production etc.

2.19 Sensitivity Analysis

Sensitivity analysis is the measurement of elasticity if the change in cost, volume and profit factors or break-even point or give profit. The strategist should focus more on the factor, which is more on the factor, which is more sensitive or responsive for profit. To measure the sensitivity of cost volume profit factors one can see the impact of certain percentage or amount change in volume, price or cost factors on net profit. In other words, sensitivity analysis in the measurement of responsiveness in outcome with the changes is in the determination variable. We know that the goal of business enterprises is to maximize profit. Is the excess of revenues over the total cost?

Net Profit= Total Sales Revenues-Total Cost

=sales Unit × SPPU-Sales Unit × VCPU- Fixed Cost – Taxes

So that, Profit =F (Sales Volume, Selling Price, VC, FC, taxes, etc. Means, Profit are the Function, Price, VC, FC, Taxes and so on.

But none of the factors remain unchanged; sometime the manager can intentionally change the price and cost factors as a part of strategic decisions. But the strategy should focus more on the factor, which is more sensitive or responsive for profit. Therefore, to measure the sensitivity of cost volume profit factors, we can see the impact of certain percentage or a out change in volume price or cost factors on net profit (Bajracharya, 2004:245).

2.20 A Brief Review of the Previous Research Work

The research topic cost volume profit analysis as a tools to measures effectiveness of PPC| budgeting of a company, in Nepalese context. But must researches have been made in the area of profit planning and control and management accounting in Nepalese context. As profit planning and control and management accounting cover and management accounting cover major of the aspects of cost volume profit analysis, researchers made on these area are taken into consideration for the sake of review to examine how profit planning and control and management accounting practices in Nepalese companies. An attempt is made here to review some of the researchers, which have been submitted on profit planning and control and management accounting in the context of Nepal.

Sharma (2002) has conducted research on the topic “Management Accounting Practices in the Listed Companies of Nepal”. His research main objective was to examine and study the practice of management accounting tools in the listed companies in Nepal. The specific objectives were:

- To study and examine the present practice of management accounting tools in the listed companies in Nepal.
- To identify the area where management accounting tools can be applied to strengthen the companies.
- To identify the difficulties in applying management accounting tools in Nepalese countries.
- To make recommendations to overcome the difficulties. In applying management accounting tools in Nepalese companies.

Mr. Sharma’s research is based on primary data only satisfied random sampling with proportionate allocation of percentage is followed to draw the sample. Mr. Sharma has pointed out various finding and recommended in his research. Some remarkable finding was as follows:

- Different types of management accounting tools presented in the college curriculum are not found to be applied by the listed company of Nepal.
- Management accounting is to help manager is overall management activities by providing information and helping in planning controlling and decision making.
- Nepalese listed companies are in infant stage in practicing of management accounting tools such as capital budgeting annual budgeting cash flow ration analysis, zero based budgeting, activity based budgeting activity costing target costing and value engineering.
- Lack of information and extra cost burden are the main reasons behind not practicing such tools.

- As Nepal is proceeding towards globalization and get memberships of WTO companies are recommended to apply management accounting tools to fit with the global environment.

A study done by Gautam (2006) has studied on the topic of "An Analytical and Comparative study on Cost Volume Profit Analysis of Unilever Nepal Ltd and Dabur Nepal Limited" His objectives were:

- To calculate of profit resulting from a budgeted sales volume.
- To calculate breakeven point, CM analysis, margin of safety analysis and profit volume analysis.
- To calculate sales volume to produce desired profit.
- To contemplate the increase or decrease in profit due to the change in volume of production.
- To suggest and recommended with the major findings.
- To encourage greater use of CVP approach to manufacturing enterprise in profit planning and control.

He has pointed out various findings and recommendations based on the analysis of data and information. Some of the major recommendations are as follows:

- Classification of expenses items as variable and fixed or controllable and non-controllable must be made within specific framework of responsibility and time.
- Separate cost control department should be established for the effective management of cost.

- UNL and USNPL should be consider BEP analysis while preparing sales plan, production plan and selling price of its products.
- Both companies should consider about the product line to improve its profit. Market studies on demand, supply and pricing of product should be carried out and loss oriented cost should be identified and controlled.
- As UNL and USNPL is multi-product company, more emphasis should be provided the product having high contribution so more have more profit.
- Some person of profit should be allocated to research and development program so that new technology could be found which provide more competitiveness in the market.
- UNL and USNPL should have proper manpower planning.
- System of periodical performance reports should be strictly followed to be consists about poor performance and take corrective action immediately and timely.
- New market areas should be identifying for the coverage of increased activities of companies.
- A systematic approach should be made towards comprehensive profit. This can considerably contributed to the increase in profitability to UN L and USNPL. Since separate on of cost in to their fixed and variable elements each and the heart of CVP analysis, all decision makers sought to be fully aware of, and understand the cost structure of their operation otherwise CVP analysis will provide meaningless information.

Bhusal (2006) has conducted a research entitled " Use of Cost volume Profit Analysis to plan the Profit in Nepalese Manufacturing Companies: A Case Study of Bottlers Nepal Ltd". The main objective of his study is to examining the use of CVP analysis to plan the profit in Bottlers Nepal limited. The other specific objectives of this study are:

- To study the present application of CVP analysis in Bottlers Nepal Limited.
- To study the profitability and financial position of bottlers Nepal Limited .
- To analyze the CVP and its impact in profitability of Bottlers Nepal Limited.

His research was based on the secondary data. His major finding is his research is as follows:

- The company has not maintained the broad and long range objective and periodic report and objective are limited to the high ranking official only.
- Sales and production target are not achieving because there is not an effective forecasting system.
- The profit of the company is not satisfactory.
- The company has no details and systematic expenses plans. The fixed, variable and mixed expenses plan is the necessary elements for profit planning and control.
- BNL has not proper practice of segregating the costs into fixed and variable or controllable and non-controllable.

A study done by Dahal (2006) has studies on the topics of “Cost Volume Profit Analysis as a tool to measure the Effectiveness of Profit planning with special reference to Dabur Nepal Ltd.” The main objective of the research was;

- Examine the variance between target and actual sales and production.
- To show the capacity utilization of Dabur Nepal ltd.
- To forecast future production and sales.
- To analyze financial performance.
- To analyze the CVP of company and its impact of profit planning.
- To analyze the trend of profit over the time covered by the study.
- To provide recommendations and suggestions for improving the profit planning systems of Dabur Nepal Pvt .Ltd.

The conclusions of his study were as follows:

- Dabur Nepal Pvt. Ltd constitutes lack of adequate inventory policy.
- No control over external factor i.e. it has poor SWOT analysis.
- Dabur Nepal Pvt. Ltd does not prepare strategic and policies for long term.
- Dabur Nepal Pvt. Ltd is not able to coordinate among various departments.
- Dabur Nepal Pvt. Ltd does not prepare raw material requirement budget and raw material purchase budget systematical.

He made the following recommendations in his study:

- CVP analysis should be considered while formulating profit plan.
- Profit planning manuals should be communicated from top level to lower level.
- The company management should look carefully into the basis of setting target for sales and achieving those targets meaningfully.
- Dabur Nepal Pvt. Ltd should focus on the relationship between expenditure and benefit, expenses planning and controlling is necessary to obtain companies goals.
- To get the idea of future cash requirement and application of the form, it should make cash budget systematically.
- The company should prepare raw material budget and production budget scientifically.

Adhikari (2007) has presented a dissertation on the topic of "Cost Volume Profit Analysis of Nepal Lube Oil Limited". The main objective of his study is to examine the use of CVP analysis to plan the profit in Nepal Lube Oil Limited. The other specific objectives of the study are:

- To produce and refine oil and chemicals in the country itself, substitute import of refined goods and purchase necessary new materials from other countries.
- To make necessary contract and agreement with different national and international governments, departments, office and bodies to increase production, capabilities and improve quality.
- To study the relationship between cost volume and profit as a tool of budgeting.

- To manage the non-technical and technical manpower from outside and inside the company and give necessary training inside or outside the company.
- To sell the product in direct part of the country.
- To provide necessary suggestion and recommendation wherever necessary based on the findings.
- Based on different analysis, observation and informal discussion the followings are the major findings at Mr. Bijaya research findings.
- The company has usually very low margin at safety and also negative in some fiscal years.
- Sales amount of the company are fluctuating and in increasing trend.
- The budgeted sales are more than the actual sales in equality.
- Correlation coefficient between budgeted sales quantity and actual sales quantity is negative; this shows that there is a moderate degree at negative correction coefficients.
- In flexible budget the company suffers from losses below 100% capacity utilization. Here 100% capacity indicates that current utilization capacity is average.
- BEP is in increasing trend due to decrease in (an) pr ration.

Krishana Ram sijakhwo (2008) has conducted research on the topic "CVP analysis as a managerial Tool in Bhaktapur carft Paper limited".

The main objectives of this research are as follows;

- To study the relationship of cost volume and profit BCP Ltd.
- To analyze the impact of CVP of the company productivity.
- To calculated BEP,MOS, CM etc. and its impact on the profitability.

- To make suggestion for future prospects, problems and promotion of the Bhaktapur Craft Paper Ltd through this study.

The data were collected by primary and secondary medium however the following findings and remarkable were described in his study:

- Very high degree of correlation between sales and total costs showed that if total cost changed, it would affect the sales revenues of the company due to sales and total costs relation should be considered.
- Company should attention to improve performance, using management principle like MBO, participating management activities etc.
- Scientific costs segregation method(i.e. least square method) should be used for costs segregation as mixed costs into fixed and variable cost that help to control costs minimize.
- Research is focused immediately to improve cost analysis by using CVP analysis as tools of PPC.

Dhungel (2009) has conducted research on the topic "A Comparative Cost Volume Profit Analysis of Alcoholic Manufacturing Companies: A comparative Case Study of United Sprits Nepal Pvt. Ltd. & Himalayan Distillery Ltd". His objectives were:

- To show the relationship of Cost, Volume and profit between multi products.
- To study and analyze different components of cost as per cost behavior.
- To assess break-even point of overall firm as well as individual product.

- To evaluate the impact of profit of Himalayan Distillery Limited and United Sprite Nepal Private Limited.
- To provide necessary suggestions and recommendations on the basis of major findings of the study.

Mr. Dhungel has pointed out various findings and recommendations in his research. Some remarkable findings were as follows:

- Sales plan of both companies are not properly maintained. There is a fluctuation between budgeted sales and actual sales in each year.
- Sales trends of companies are increasing yearly. It shows that the net loss can be decrease in the future of Himalayan Distillery Limited and profit should increase in United Sprite Nepal Private Limited.
- Expenses trend of both is increasing year by year.
- Practices of CVP analysis tool are not mostly use to forecast and evaluate cost, Volume and profit in the manufacturing companies .
- Companies shows the budgeted sales in higher expectation where as condition occurs reserve vice-versa in cost too.
- Companies show the interest in the PV analysis but there are not proper used of technique towards it.
- Some specific products are utilizing there specific fixed cost. Since lower fixed costs ,mass production and sales of selective products line causes profitability

Budhathoki (2010) has conducted research on the topic "CVP" analysis of information technology magazine publication house special reference with PC – Info Private limited"

His objective were :

- To analysis of breakeven point.
- To analysis the fixed cost utilization at the optimum level .
- To reduce cost by increasing the span of con troll since fewer supervisors are needed.
- To help the management for considering future trends and conditions.
- To suggest the management to give time and adequate attention to the effect of the expected trend of general business condition and recommended with the help of major findings.

  Mr. budhathoki has pointed out various findings and recommended in his research. Some remarkable findings were as follows.
- Fixed cost is in increasing trend that the fixed cost is not being utilized to its optimum level or the capacity utilization is in decreasing trend.
- Actual sales in the decreasing trends so that it will lower the contribution margin and it will affect the power of bearing fixed cost by the company and the company expressed itself towards the loss.
- Profit volume ration is in decreasing trend which reflects that the overall profitability is in decreasing trend or the variation between sales and the variable cost is in decreasing trends.
- Margin of safety is in decreasing trend that it reflects that company's safety has been lowered over the year.
- Fixed financial cost interest seemed fixed or constant over the year the period that reflects the company has not redeemed its debt during the year.

- Variable cost per unit in also in increasing trends which will affects the contribution margin per unit and the over all profitability of the company.

2.21 **Research Gap**

All the previous research works were done on PPC of manufacturing company. The research studies have recommended than effective implementation of PPC. Some research was done on CVP analysis as an important tool of PPC.

One research conducted on practice of management accounting is listed companies of Nepal focusing on the overall aspect of management accounting but could not deal on specific tools like CVP. This is the age of specialization not generalization . it is realized that specific tool becomes more effective rather than using overall tools as a whole of once. This is the main weak point of the previous researches. One research on CVP analysis was made but failed deal on utilization of CVP. Thus to fill up these gap the current research was conducted. Mainly this research focused on operating position of the organization. Therefore profit and loss account was the focal point of the study of this research point and loss account fully provides the information of revenue and cost clear picture of CVP and its impact on productivity were made this research. Probably this might be the first research study in the sense of providing Multiproduct analysis carried on this topic in Nepal. So this study will be fulfill to those interested person, scholar, students, teachers, stakeholders, civil society, businessman and government for academically as well as policy perspectives.

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Introduction

Research is the aim to find out for the society or valuable for certain group of people. it is systematic and scientific study, the result of which will not be acceptable, if any of these characteristics are not fulfilled. For research purpose, systemic study means to be not over expensive or overtime consuming with the availability of information. This chapter highlights the research methodology used for the study of comparative cast volume profit analysis of STCL and NTL to fulfill defined objectives of the study of appropriate research methodology has to followed. So this chapter is related with the research methodology applied in this study. It is the most imported part of the study. Therefore it is help us to find out accuracy validity suitability. This chapter included research designed, population and sample, nature source of data and method of analysis and presentation.

3.2 Research design

This research design of this study is analytical as well as descriptive approach. The main objective of this study is relationship between cost volume and profit .specially comparative analysis of STCL and NTL. This study is closely related with the sales, profit, and cost so analytical approach has been considerably adopted to present data properly and effectively . similarly descriptive approach is used an effectiveness of CVP of STCL and NTL .

3.3 population and sample

There are 36 public enterprises operating in Nepal. Those are the sample of study for this study only Salt trading corporation limited and national trading limited as sample .

3.4 Nature and sources of data

This study is based on primary as well as secondary data. Primary data have been collected through direct observation, questionnaires, direct meeting with concerned persons. and secondary data depend upon annual reports, books, published magazine, website of concerned organization.

3.5 Method of Analysis and presentation

Analysis and presentation of the data is the core of each every research work. In order to get the concrete results from this research, data are analyzed by using different types of tools. Basically, following two techniques are used to explain the collected data.

- Descriptive Techniques

Descriptive technique is a fact- finding operation searching for adequate information. It is a type of study , which is generally conducted to assess the opinions, behaviors or characteristic of a given population and to describe the situation and events occurring at present. Descriptive technique is a process of a accumulating facts. It does not necessary seek to explain relationships, test hypothesis, make predictions, or get at meanings and implications of a study.

- Quantitative techniques

Descriptive techniques would not be enough to prepare excellent research report. To fulfill the gap, or make the research report attractive and for better understanding the following profit planning and statistical tools were used:

CVP Analysis Tools

C-V-P Analysis was included the following techniques

1. Contribution margin (CM)= Sales – Variable cost.
2. Contribution margin ratio = $1 - \frac{\text{Variable Cost}}{\text{Sales}}$
3. Break Even Point (BEP) in units = $\frac{\text{Total Fixed Cost}}{\text{SPPU–VCPU}}$
4. Break Even point (BEP) in Rs.= $\frac{\text{Totsl Fixed Cost}}{\text{CM Ratio}}$
5. Break Even Point (% of capacity) = $\frac{\text{BEP in Units/RS}}{\text{Total Capacityin Units/RS}}$
6. Cash BEP (in Rs) = $\frac{\text{Fixrd Cost} - \text{Non cash Outlay}}{1 - \frac{\text{Variable Cost}}{\text{Sales} - \text{Non Cash Outlay}}}$
7. Required sales for Desired profit (in units) = $\frac{\text{FC+Desired Profit}}{\text{CMPU}}$
8. Required Sales of Desired profit (in Rs) = $\frac{\text{FC+Desired Profit}}{\text{CM Ratio}}$
9. Required sales in units for DAPT = $\frac{\text{FC}+\frac{\text{DPAT}}{(1-\text{T})}}{\text{CMPU}}$
10. Required Sales in Rs for DAPT = $\frac{\text{FC}+\frac{\text{DPAT}}{(1-\text{T})}}{\text{CM Ratio}}$
11. Safety Margin (in Units) = Actual Sales Units – BEP in Unit
12. Safety Margin (in Rs) = Actual Sales Rs. – BE Sales
13. Margin of Safety ratio = $\frac{\text{Actual/Budgeted Sales – BE Sales}}{\text{Actual / Budgeted Sales}}$

For Multi product Firms

1. Overall BEP (in units) = $\frac{\text{Total Fixed Cost}}{\text{Weighted CMPU}}$
2. Overall BEP in Rs = $\frac{\text{Total Fixed Cost}}{\text{Weighted CM Ratio}}$
3. Required Sales for desired profit (in units) = $\frac{\text{F C + Desired Profit}}{\text{Weighted CMPU}}$
4. Required sales for DP (Rs) = $\frac{\text{F C + Desired Profit}}{\text{Weighted CM Ratio}}$
5. Required sales for DP after tax (in units) = $\frac{\text{FC}+\frac{\text{DPAT}}{(1-\text{T})}}{\text{Weighted CMPU}}$

Required sales for DP after tax (in RS) = $\frac{\text{FC}+\frac{\text{DPAT}}{(1-\text{T})}}{\text{Weighted CM Ratio}}$

Statistical Tools

The relationship between two or more variables can be measured by using statistical tools, in this study the following statistical tools are used

a) Time Series Analysis (trend analysis)

The collection of reading or data regarding to different time period is called time series. There are two variables in this case one most be time and other variables may be population, production, sales, profit etc. a widely and most commonly used method to describe the trend is the method of least square.

The straight line is given by the following formula:

Y= a+bx

Where,

Y= values of dependent variables

A= Y- intercept

B= slope of the trend line

X= values of independent variable (time)

b) Mean:

The sum of all the observations divided by the number of observations is called mean. In such cases all the items are equally important. It is usually denoted by X. it is defined by the following formula.

Mean (X) = $\frac{\sum x}{N}$ *(Source: Business Statistic B.C. Bajhracharya)*

Where ,

$\sum x$ = the sum of observation

N= no. of observation

c) Standard Devotion (S. D)

The standard deviation is defined as the pos itive roo t of the mean of the squared deviation from the ir mean of a values. It is also known as Root mean square deviate on. It is usually denoted by the Greek letter δ (Small Sigma)

SD= $\sqrt{\frac{\sum x^2}{N} - \left(\frac{\sum x}{N}\right)^2}$ *(Source: Business Statistic B.C. Bajhracharya)*

d) Correlation analysis

The degree of relationship between two variables at a time is called correlation. In other words, two variables are correlated in such way that if one variable change then other variables also changes subsequently.

It can be calculated by using following formula:

Co-efficient of correlation (r) = $\frac{N\sum XY - \sum X.\sum Y}{\sqrt{[N\sum X^2 - (\sum X)^2]}\sqrt{[N\sum Y^2 - (\sum Y)^2]}}$

- ❖ The correlation coefficient measures the degree of correlation between Y on X it should be between +1 and -1. If not there is no correlation between two variables.

A meaningful analysis is available from the square of correlation coefficient (r) , which is called the coefficient of determination and calculated using the following formula;

Coefficient of determination (r^2) = $\frac{[N\sum XY - \sum X.\sum Y]^2}{[N\sum x^2 - (\sum x^2)]\,[N\sum Y^2 - (\sum Y^2)]}$

Or,

$r^2 = r \times r$

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

CHAPTER IV

PRESENTATION AND DATA ANALYSIS

4.1 General Concept

Profit planning is the formal expression of the enterprises plan, goals, objective stated in financial term for specific future period of time. It is one of the most important management tools that are used to develop effective performance and systematic approach for attaining desire goals. CVP analysis a tool of PPC, can be most important device to utilize the cost with effective way. CVP analysis has become a powerful instrument in managerial decision making especially cost control and profit planning. The CVP analysis is a specific way of presenting and studying the interrelationship between cost, volume and profit.

The main purpose of this research is to examine CVP analysis as a tool to measure the effectiveness of profit planning and evaluate the present practice of CVP analysis and identify the area where CVP analysis could be applied to strengthen manufacturing industries. For this reason, salt trading corporation and national trading limited has been randomly selected for the study and analysis purpose.

To meet the said objectives the secondary data were used for sales trend analysis, cost analysis profitability analysis and cost volume profit analysis etc. the secondary data were collected from annual report of the company. Similarly the primary data were used for segregation for cost in to variable and fixed and other required queries. This study has tried to cover the salt trading corporation and national trading limited for the last five years (i.e.

2062\63 to 2066\67) the information, which has been collected from salt trading corporation and national trading corporation, were systematically.

4.2 Analysis of secondary data

4.2.1 Analysis of sales revenue

The sales budget shows the quantities each product that the companies plan to sell and the intended selling price. It provides the predictions of total revenue from which cash receives from the costumers will be estimated and also supplies the basic data for constructing budget for production costs and for selling,distribution and administrative expenses. Therefore the sales budget is the foundation of other budgets since all the expenditure is ultimately dependent on the volume of sales the sales budget is not accurate it is only estimation of demand.

Table no 4.1

Sales Revenue of Salt trading Corporation Limited

(in lakhs)

Goods/year	062/63		063/64		064/65		065/66		066/67	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Consumable material	12038	65.05	11818	61.67	14756	68.99	21672	67.93	24894.94	73.95
Agriculture Material	1.2	0.006	173.5	0.91	1382.2	6.46	1973.3	6.18	151.06	0.45
Fuel, Tyre and Tube	4409.5	23.83	4310.2	22.5	4488.8	20.99	6243.3	19.56	6888.29	20.46
Machine and equipment	33.3	0.18	26.9	0.14	137.7	224	-		1.25	0.0037

Construction Materials	560.6	3.03	1547.1	8.07	514	1.71	546.4	1.71	600.2	1.78
Other Materials	1463.3	7.9	1286.6	6.71	110.9	0.51	1469	4.60	1127.6	3.35
Total	18506	100	19162	100	21390		31904		33663.34	

Source: Annual Report 2062/63-2066/67

From the above table the sales revenue of STCL is fluctuating trend from the fiscal year 062/063to 064/065 it is slowly increasing but there after it is rapidly increasing. Most of the sales amount is covered from the consumable materials secondly, Fuel tyre and tube cover second position in of total sales. Machine and equipment cover low proportion of total sales amount in average during the study period. The presentation of the above total sales figure will be more effective by

Figure 4.1

Sales Revenue of salt trading corporation

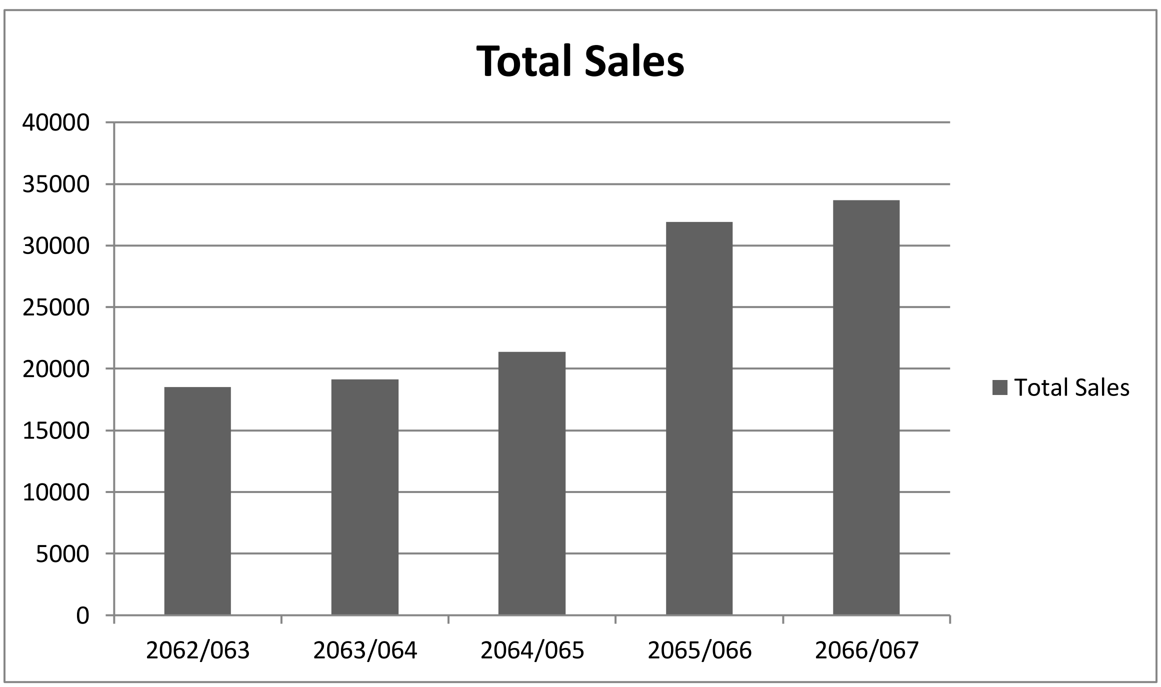


Table No. 4.2

Sales revenue for NTL

Goods/Year	061/62		062/63		064/65		065/66		066/67	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Consumable material	146.84	3.60	305.14	3.15	355.46	3.46	387.23	5.26	375.55	6.42
Sugar	73.8	1.81	87.14	0.90	98.7	0.95	72.74	0.98	69.67	1.19
Machinery& Equipment	337.71	8.29	611.52	6.31	740.43	7.1	835.62	11.35	902.34	15.44
Industrial Material	34.23	0.84	40.9	0.42	67.8	0.65	70.57	0.95	78.68	1.35
Bhansar Goods	0.06	0.0015	0.13	0.0014	0.18	0.0017	0.04	0.0005	0.9	0.015
Hard Drinks	109.6	2.61	172.43	1.78	240.2	2.32	298.5	4.05	313.14	5.36
Constructional material	6.73	0.17	6.23	0.0064	9.88	0.095	8.96	0.12	9.01	0.15
Duty Free/Duty paid goods	2373.33	58.23	4802.1	49.58	5340	51.57	1774.11	24.11	2234	38.23
Furnished oil	0		80.45	8.31	92.5	0.89	98.46	1.33	87.32	1.49
Malkhad	2.97	0.0073	2.1	0.0022	3.1	0.0029	2.86	0.039	2.1	0.035
Other goods	990.12	24.3	3577.76	36.94	3405.07	32.8	3807.43	51.75	1545.1	30.29
News print	.09	0.002	0.1	0.0001	0.11	0.00106	0.1	0.001	.15	0.0025
Total	4075.48	100	9686.08	100	10353.43	100	7356.62	100	5617.96	100

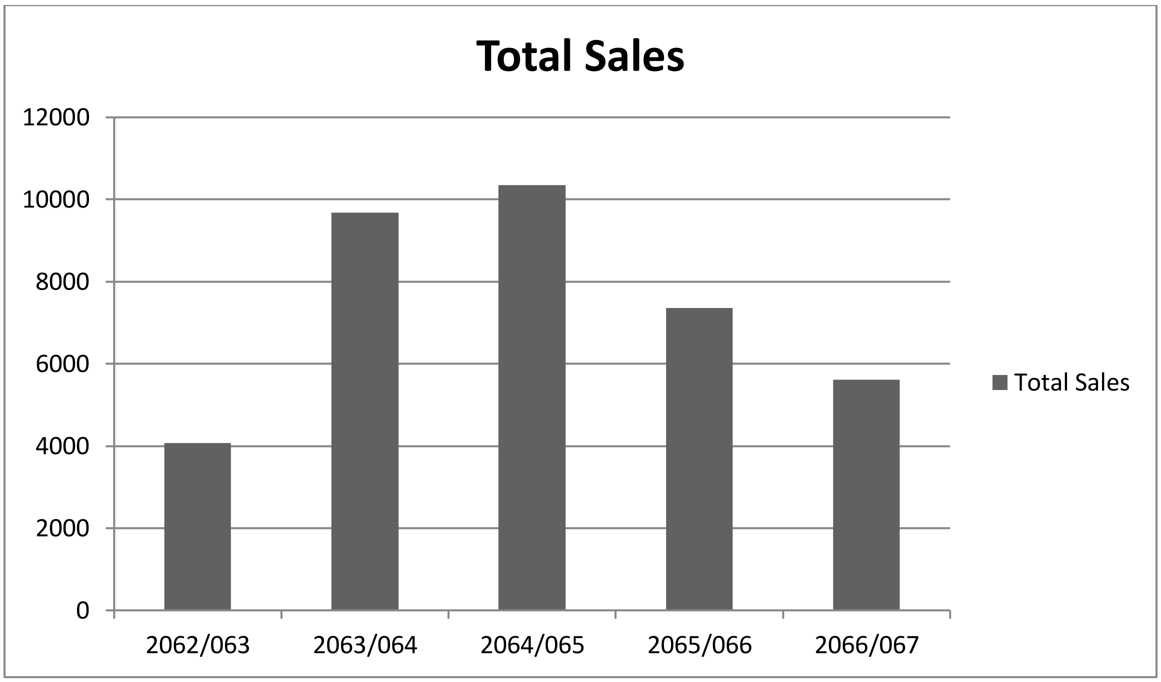
Source: annual Report of NTL 062/63 to 066/67

From the above table, total sales revenue of NTL is fluctuating trend. From the fiscal year 062/063 to 064/065 it has started to increased and FY 064/65 to 066/67 the sales revenue of NTL is decreasing. Most of the sales amount is covered by duty free/duty paid goods, which obtain more sale revenue.

Other goods covered the second one. But in depth analysis of sales revenue we can see the portion of Bhansar goods is lower than other. And other goods of sales amount during the study period is average.

Figure: 4.2

Sales Revenue of National Trading Limited



4.2.2 Profit (Loss) pattern of STCL and NTL

Profit is the major element of each and every business endeavours for survival further development and fulfilling social expectation. In modern business effectiveness and efficiency of any business organization or management are measured from profit. Following table shows the profit and loss trend of STCL and NTL during the study period.

Table No.4.3

Profit (loss) trend of STCL

year	**sales**			**Profit/loss**		
	Rs	**Index (%)**	**% change**	**Rs**	**Index (%)**	**% change**
062/63	18506	100		290.5	100	
063/64	19162	103.54	3.55	-1036.5	-356.8	-456.76
064/65	21390	115.58	11.63	103.3	35.56	109.96
065/66	31940	172.58	49.16	115.5	39.76	11.81
066/67	33663	181.9	5.40	371.5	127.88	221.65

Source*: annual report of STCL of 062/63 to 066/67*

Table 4.4

Profit (Loss) of NTL

year	**sales**			**Profit/loss**		
	Rs.	**Index (%)**	**% Change**	**Rs.**	**Index (%)**	**% Change**
062/63	4075.48	100		-514.3	100	
063/64	9686.08	237.66	137.66	-362.60	70.38	29.49
064/65	10353.43	254.04	6.88	57.16	11.11	115.76
065/66	7356.60	180.5	-28.94	-483.97	94.10	-946.69
066/67	5617.62	143.34	-23.63	-1587.86	313.83	-228.09

Source: *annual report of NTL FY 062/63 to 066/67*

From above table shows that STCL and NTL has fluctuating trend of profit and loss. During the successive year of study period profit trend of STCL was fluctuating but it has beared loss during the FY 063/64. Thereafter it has started generated profit. At FY 066/67 the profit is increased by 221.65%. However NTL has beard profit at FY 064/65 but other FY has beard losses.

Fig No.4.3

Sales and profit trend of STCL

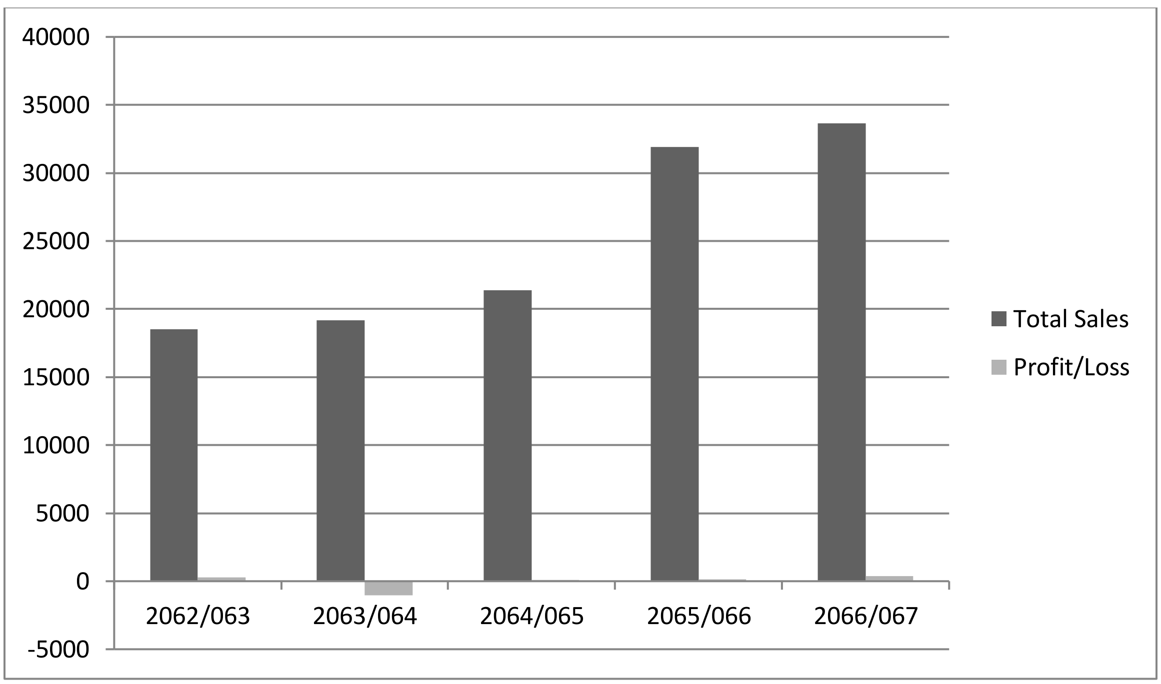
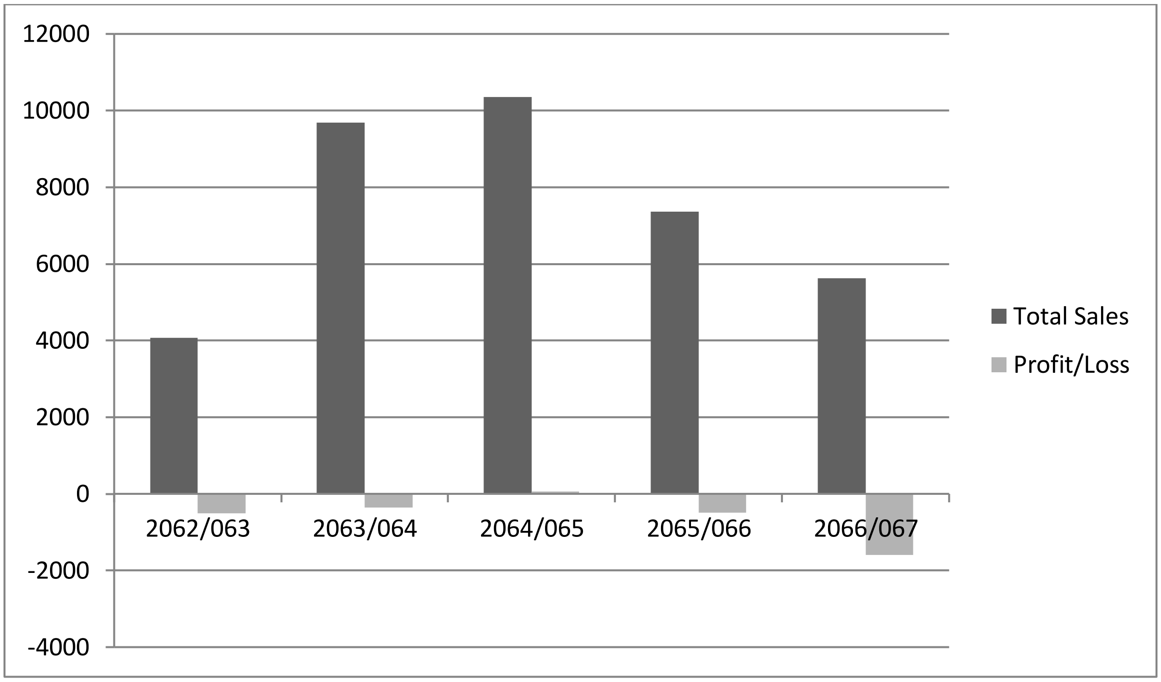


Figure No.4.4

Sales and profit trend of NTL.



4.3 Analysis of correlation between sales and net profit of STCL and NTL

Two variable said to be correlated if change in the value one the variable appears to be related or linked with change in other variable. Correlation is an analysis of the covariance between two or more variables. Correlation analysis deals with the degree of relationship between variables. The correlation analysis refers to the closeness of the relationship between the variables. The degree of correlation is measured by correlation coefficient. Various methods can be used to determine correlation coefficient. Here, Karl Pearsons coefficient of correlation, a most popular method, is used to determine the coefficient of correlation between sales and net profit.

Table 4.5

Summary of comparative statistical calculation of STCL and NTL

Detail	For STCL	For NTL
Correlation coefficient between Sales and NP (r)	0.6	0.61
Correlation coefficient between Sales and VC	0.32	0.98
Correlation coefficient between Sales and FC	0.23	-0.43

The value of correlation coefficient between two variables (i.e. sales and net profit) is 0.60 and 0.61 of STCL and NTL. Again the value of correlation coefficient variable i.e. Sales and VC is 0.32 and 0.098 of STCL and NTL again the value of correlation Coefficient between to variable i.e. Sales and FC is 0.23 and – 0.43 of STCL and NTL this indicates that there is positive co-relation between sales and NP and sales and VC but the correlation coefficient between sales and FC and NTL has negative correlation the hole study indicates that positive correlation suggest positive relation between to variable that is (sales increased NP also increased) but negative correlation suggest negative relation between to variable i.e. (sales increased FC decreased and vice versa).

4.4 Cost Analysis of STCL & NTL

Cost planning and control is not reduction in cost but it means better utilization of limited resources. Expenses planning and controlling should focus on the relationship between expenditure and benefits derived from those expenditure. Cost analysis is necessary to attain enterprises goal. There are a different types of cost incurred in the company.

1. **Fixed cost**

   Fixed expenses are those in which the total fixed costs remain constant over a relevant range of volume/, output, while the unit fixed costs vary with output. As the production units increase fixed costs per unit decrease, it is because same cost will be dispersed in more production units. Fixed cost in total are variable for different FY affected by internal and external environmental factors of the company. In fixed cost administrative cost, depreciation expenses, interest expenses are included. They remain constant in amount for a given period with a relevant range of an activity.

2. **Variable costs**

Variable expenses are activity base because they are incurred as a direct result of output or production activity or work done. Variable costs are those in which the total cost are assumed to change in direct proportion to changes in volume/ output within the relevant range, while the unit cost remains constant, variable cost appear on a graph as a straight line with a positive slope, the line rises as the production volume increases.

3. **Semi variable cost or Semi fixed costs**

   Expenses that cannot be categorized as purely fixed or variable is termed as semi variable or mixed cost. Semi variable costs contain both variable and fixed cost elements. Classification of cost into variable and fixed is very important to plan and control of costs. It helps to determine the volume of operation required to maintain the desired profitability.

Classification of cost into fixed cost and variable in very important to plan and control the cost. It helps to determine the volume of operation desired to maintain the industry profitability. But STCL and NTL has no maintained any clear-cut boundaries about classification of cost as fixed and variable. So far the purpose of the study, costs is classification as fixed and variable.

Table No.4.6

Classification of costs of STCL

(in lakhs)

year	**VC**	**Index (%)**	**% Change**	**FC**	**Index (%)**	**% Change**
062/63	15920.6	100	-	2471.13	100	-
063/64	16445.4	103.29	3.29	2559.4	103.5	3.57
064/65	18376.3	115.42	11.74	2724.78	110.26	6.46
065/66	28135.14	176.76	53.10	3467.24	140.3	27.24
066/67	28479.8	178.88	1.23	4615.13	186.76	33.10

Source: annul report of STCL 062/63 to 066/67

From the above table variable cost is increase in increasing way up to 065/66. But at FY 066/67 it has unexpectedly decrease the % of increasing rate. Likewise total FC of STCL is increase in every fiscal year 063/64, 064/65, 65/66, and 066/67 by 3.57%, 6.46%, 27.24% and 33.01% respectively.

Table No 4.7

Classification of cost of NTL

(in lakhs)

year	VC	Index (%)	% Change	FC	Index (%)	% Change
062/63	3266.57	100	-	1473.88	100	-
063/64	9218.35	282.20	182.19	1342.67	91.09	-8.90
064/65	8939.62	273.66	3.02	1500.8	101.82	11.77
065/66	6472.91	198.15	27.01	1567.48	106.35	4.44
066/67	5779.51	176.91	10.68	1676.65	113.75	6.96

Source: annul report of NTL 062/63 to 066/67.

From the table variable cost is fluctuating trend. in FY 062/063 to 064/65 the VC is increasing position. After FY 065/066 the cost is going downwards. At FY 063/64 FC is decrease as compare to FY 062/63. Similarly total FC of NTL is increasing after the FY 063/64.

Analysis of semi variable and semi fixed cost

Expenses that cannot be categorized as purely fixed or variable is termed as semi variable or mixed cost. Semi variable costs contain both variable and fixed cost elements. Classification of cost in to variable and fixed is very important to plan and control of costs. It helps to determine the volume of operation required to maintain the desired profitability. STCL and NTL have no practice of using systematic method of practice of classifying the expenses are into fixed and variable component. For example, all salary and other administrative expenses are classified as fixed cost since all staffs paid monthly basis, but all direct labour cost directly related with production process are classified as variable cost.

Discussion with the company's accountant and other related employees reveal that practice of identification of semi-variable cost and their segregation into fixed and variable was not found.

4.5 Analysis of Sales and Cost Relationship

Cost structure refers the relative proportion of fixed and variable cost in an organization. There is no categorical answer possible of which cost structure is best. A firm might have many fixed costs but few variable costs or mixed costs and vice versa. A firm's cost structure can have a significant impact on decision in the matter of risk etc. company with high fixed cost will incur losses much more quickly than the company with lower fixed cost if the reversionary condition strikes the industry. In sum, company with high fixed cost will experience wider movement in net income as changes take place in sales, with greater profit in good year and greater loss in bad year. Company with low fixed cost will enjoy somewhat greater stability in net income, but if will do so at the risk of losing substantial profit if sales trend upward in the long run.

The costs analysis of STCL and NTL are briefly analyzed in the below table for the fiscal year 062/63 to 066/67.

Table No. 4.8

Cost structure Analysis of STCL &NTL

	STCL (in lakhs)				NTL (in lakhs)			
FY	**Sales revenue**	**Total VC**	**Total FC**	**Total cost**	**Sales revenue**	**Total VC**	**Total FC**	**Total cost**
062/63	18506	15920.61	2471.13	18391.74	4075.48	3266.57	1473.88	4740.1
063/64	19162	16445.4	2559.4	19004.8	9686.08	9218.35	1342.67	10561.02
064/65	21390	18376.31	2724.78	21101.09	10353.43	8939.62	1500.8	10440.42
065/66	31904	28135.14	3467.24	31602.38	7356.62	6472.91	1567.48	8040.39
066/67	33663	28479.81	4615.31	33095.12	5617.60	5779.51	1676.65	7456.16

Source: annual report of STCL and NTL(FY 062/63 to 66/67)

Table No 4.9

Cost structure analysis of STCL and NTL in Percentage

Particular/year	**2062/063**	**063/064**	**064/065**	**065/066**	**066/067**
%of variable cost to total cost(STCL) %of variable cost to total cost(NTL)	86.56 68.91	86.53 87.28	87.08 85.62	89.03 80.50	86.05 77.51
%of variable cost to sales revenue (STCL) %of variable cost to sales revenue (NTL)	86.02 80.15	85.82 95.17	85.91 86.35	88.19 87.98	84.61 102.8
%of variable cost increase (STCL) %of variable cost increase (NTL)		3.30 182.20	11.74 -3.02	53.18 -27.59	1.23 -10.68

%of fixed cost to total cost (STCL) %of fixed cost to total cost (NTL)	13.43 31.09	13.46 12.71	12.91 14.37	10.97 19.49	13.95 22.49
%of fixed cost to sales revenue (STCL) %of fixed cost to sales revenue(NTL)	13.35 36.16	13.35 13.86	12.73 14.49	10.86 21.30	13.8 29.85
%of sales increase (STCL) % of sales increase (NTL)		3.54 137.66	11.62 6.89	49.15 28.95	5.51 -23.64

Source: annual report of STCL and NTL (FY 062/63to 066/067)

From the above table the proportion of variable cost and fixed cost of STCL and NTL, proportion of variable cost & fixed cost of STCL for fiscal year 062/63 to 66/67 are 86.56% & 13.43%, 86.53% & 13.46%, 87.08% &12.91%, 89.03% &10.97% and 86.05% &13.95% respectively. And NTL for fiscal year 062/63to 66/67 are 68.91% & 31.09%, 87.28% & 12.71%, 85.62% &14.37%, 80.50% &19.49% and 77.51%&22.49% respectively .overall the proration of variable cost is higher than the fixed cost in both companies. Similarly the proportion of variable cost and fixed cost to total sales revenue of STCL for the fiscal year 062/063 to 066/67 are 86.02% & 13.35%, 85.82% & 13.35%, 85.91% & 12.73%, 88.19% & 10.86%, and 84.61% &13.8 respectively and for NTL fiscal year 062/63 to 066/67 are 80.15% & 36.16% 95.17% & 13.86%, 86.35% &14.49%,87.98% & 21.30% and 102.8% & 28.85% respectively. Here the proportion of variable cost to sales revenue and fixed cost to sales revenue is almost constant in both company. Again the percentage of sales increase/ decrease and percentage of variable cost increase/decrease of STCL for fiscal year 2062/63 to 066/67 is 3.54% & 3.30%, 11.62% & 11.74%, 49.15% & 53.18%, 5.51% & 1.23% respectively. And NTL for fiscal year 062/063 to 066/67 are 137.66% & 182.20, 6.89% & (3.02)%, 28.95% & (27.59)%, (23.64)% & (10.68)% respectively. It shows that when sales increased then the variable cost is also increased and vice-versa. Rate of increased in sales is less than the rate of increased in variable cost and vice versa. The relationship between sales revenue fixed cost and variable cost can be shown in the bar diagram which is presented below.

Figure 4.5

Sales, FC, and VC Trend of STCL

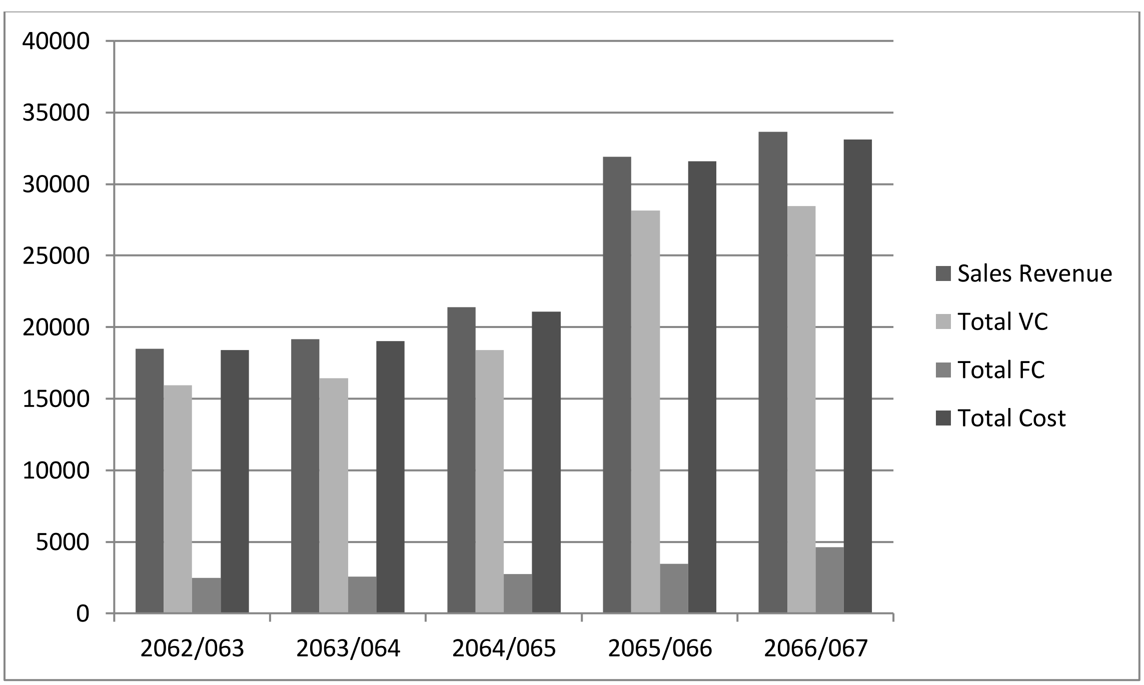
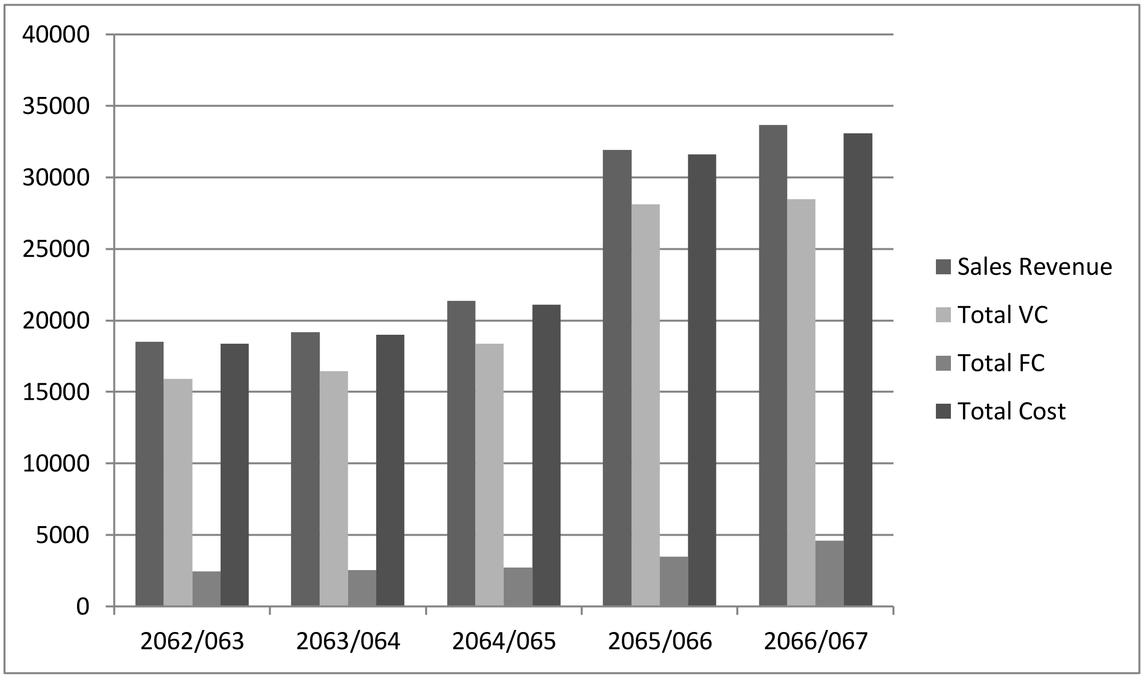


Figure 4.6

Sales, FC, and VC Trend of NTL



4.6 Cost Volume profit Analysis of STCL and NTL

Cost volume profit is a management accounting tool to show the relationship between the ingredients of profit planning. Profit planning is the function of selling price of the product and unist sold. The entire gamut of profit planning is associate with CVP interrelationship. CVP analysis is the technique that explores the relationship, which exists among costs, revenue, output level and resulting profit. Cost Volume profit analysis can be extended to cover the effects of change in selling prices or services fees, cost income tax rate and product mix. The aim of CVP analysis is to have a fair estimate of total costs, total revenue and profit at various sales volumes. CVP analysis provides the management with the comprehensive overview of the effects on revenue and costs of all kinds of short run financial changes. It is related to profit, sales volume and costs. CVP analysis helps to determine the minimum sales volume to avoid losses and the sales volume at which the profit goal of the company will achieved. And this analysis is possible only when the management has information about variable and fixed costs , sales revenue, and selling price of the product on the calculation of BEP in STCL and NTL, following assumption should be considered.

- Activity base is selected in terms of sales revenue.
- The concept of cost variability is valid, so costs can be classified as fixed and variable .
- Other types of income (non operating income) are not included in the revenue.
- Sales mix ratio among the products remains constant.
- There is no significant change in stocks.

Table No.4.10

Income statement of STCL for the year 2062/63to 066/67

(in lakhs)

Particulars	**062/063**	**063/064**	**064/065**	**065/066**	**066/067**
A Sales Revenue	18506	19162	21390	31904	33663
B. Variable cost Total variable cost	15920.61	16445.4	18376.31	28135.14	28479.81
C. Contribution margin (A-B)	2585.39	2716.6	3013.69	3768.86	5183.19
D. fixed cost:	2471.13	2559.40	2724.78	3467.24	4615.13

Total fixed cost					
E. profit (loss) (C-D)	114.26	157.20	288.91	301.62	568.06
F. P/V ratio=(CM/Sales)	0.1397	0.1417	0.1408	0.1181	0.1540
G. BEP =(FC/PV ratio)	17688.83	18062.1	19352.13	29358.50	29968.38
H. MOS= (A-G)	817.17	109.99	2037.87	2545.50	3694.62

Source: Annual report of STCL

Table No.4.11

Income statement of NTL for the year 2062/63to 066/67

(in lakhs)

Particulars	062/063	063/064	064/065	065/066	066/067
A Sales Revenue	4075.48	9686.08	10353.43	7356.62	5617.60
B. Variable cost Total variable cost	3266.57	9218.35	8939.62	6472.91	5779.51
C. Contribution margin (A-B)	808.91	467.73	1413.81	883.71	(161.91)

D. fixed cost: Total fixed cost	1473.88	1342.67	1500.8	1567.48	1676.65
E. profit (loss) (C-D)	(664.97)	(874.94)	(86.99)	(683.77)	(1838.56)
F. P/V ratio= (CM/Sales)	0.1984	0.0482	0.1365	0.1201	(0.0288)
G. BEP in Rs = (FC/PV ratio)	7428.83	27856.22	10994.87	13051.45	(58217.01)
H. MOS= (A-G)	(3353.35)	(18170.14)	(641.44)	(5694.83)	63834.62

Source: Annual report of NTL

4.6.1. Contribution Margin Analysis

Contribution margin is the different between sales amount and variable cost. In the other words, fixed cost plus the amount of profit is equivalent contribution margin. To fulfill the objective of study, BEP and other related computation are necessary to complete. Contribution margin can be presented as follows;

Contribution Margin(CM) = Sales Volume – Variable cost

Contribution Margin(CM) = profit + fixed cost

For STCL

CM for 062/63 = 18506-15920.61

= 2585.39

Or, = 2471.13+ 114.26

= 2585.39

For NTL

CM for 062/63 = 4075.48 – 3266.57

= 808.91

Or, = 1473.88 – 614.97

= 808.91

From the above table no. 4.14 & 4.15 shows the calculation of CM of STCL and NTL for the five fiscal year 062/63 to 066/67. CM for five fiscal year shows the fluctuation trend. high CM is signal of high profit, low CM sinnal low profit. Above table clearly shows that STCL in 066/67 and NTL in 064/65 represent the high CM. And in fiscal year 062/63 STCL represent the lowest profit & FY 066/67 NTL represent loss.

4.6.2 Profit Volume Analysis

Profit volume ratio establishes a relationship between the contribution and sales volume. The two factors profit and volume are interconnected and dependent with each other. Profit depends upon sales, selling price to grant extent will depend upon the volume of production. It can be presented by :

Profit volume (P/V) ratio = CM/Sales

For STCL

PV ratio for base year 062/63 = 2585.39/18506

=0.1397

For NTL

PV ratio for base year 062/63 = 808.91/4075.48

= 0.1984

From the above table 4.14 & 4.15 shows that the profit volume ratio STCL & NTL for the FY 062/63 to 066/67. The PV ration of STCL & NTL is fluctuating over the five FY. An increase in CM means increase in profit only because FC is assumed to be constant in certain level of activity. Management tries to increase the volume of the ratio by reducing the VC or increase in selling price.

4.6.3. Break Even Points (BEP) Analysis

The point which breaks the total cost and the sales revenue evenly to show the level or output or sales at which there shall be neither profit nor loss is regarded as a BEP. Through CM approach, BEP can be express as:

BEP in Rs = Total FC/PV ratio

For STCL,

BEP for the base year 062/63 = 2471.13/0.1397

= 17688.83 lakhs

BEP for the fiscal year 066/67 = 4615.13/0.1540

= 29968.38 lakhs

For NTL,

BEP for the base year 062/63 = 1473.88/.1984

= 7428.83

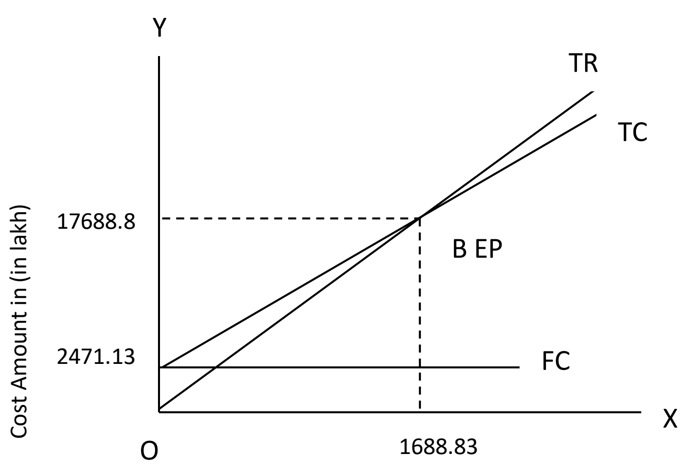
BEP for the fiscal year 066/67 = 1676.65/(0.0288)

= (58217.01) lakhs.

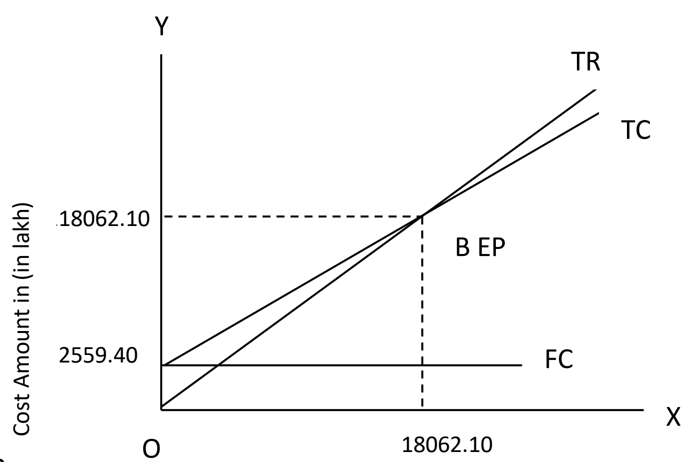
From the above calculation, BEP for STCL & NTL for the base year is Rs17688.83 & 7428.83 in lakhs respectively. Similarly FY 066/67 BEP of STCL & NTL is Rs 29968.38 & (58217.01) respectively. Other calculation of BEP is shown in Table No, 4.14 & 4.15. The breakeven point of STCL and NTL has fluctuating trends. The BEP can be also determined with the help of a graph. A break even chart of STCL and NTL for fiscal year 2062/63to 066/67 is a given below. When sales revenue is shown in X-axis and cost of amount is shown in Y-axis, BEP analysis is given below graphs;

Figure No 4.7

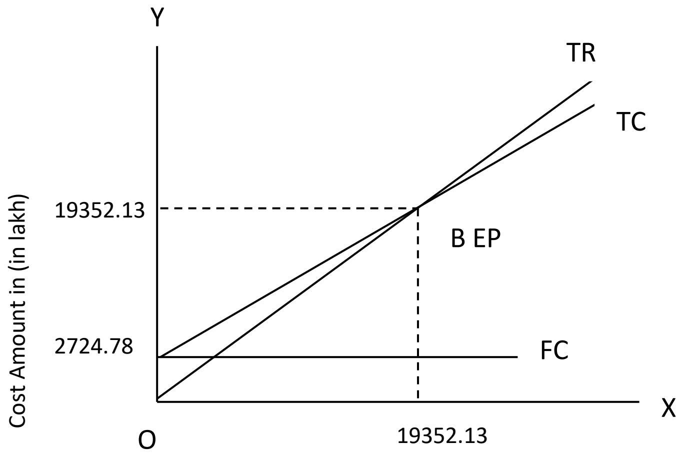
Break even chart analysis of STCL



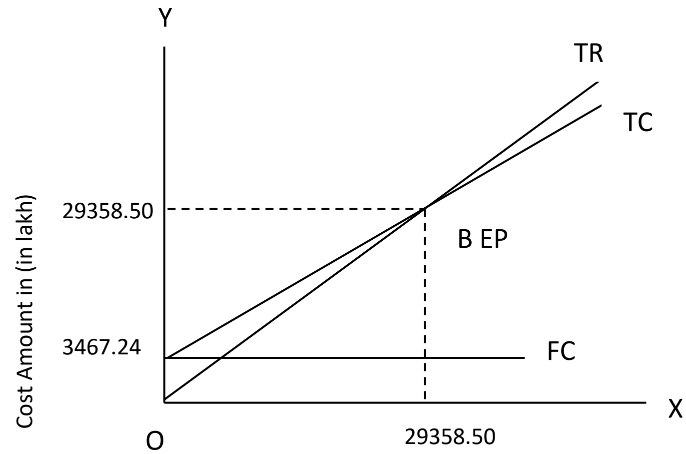
Sales revenue (in Lakh) BEP in Graph for F/Y 2062/063



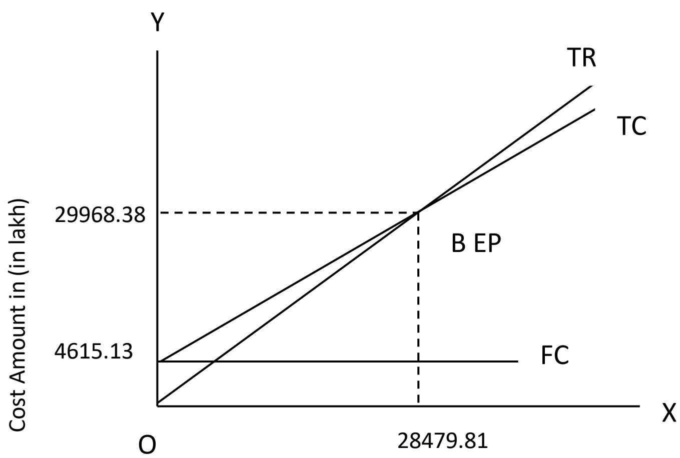
Sales revenue (in Lakh) BEP in Graph for F/Y 2063/064



Sales revenue (in Lakh) BEP in Graph for F/Y 2064/065



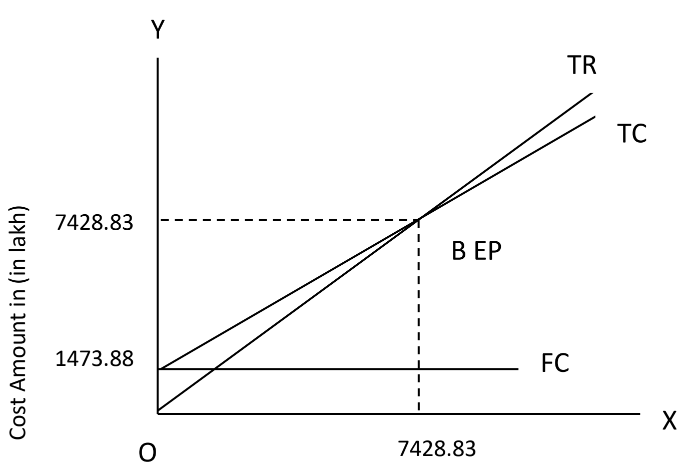
Sales revenue (in Lakh) BEP in Graph for F/Y 2065/066



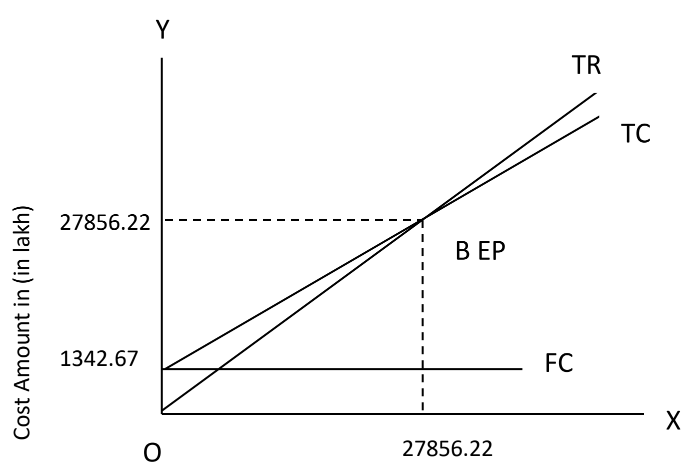
Sales revenue (in Lakh) BEP in Graph for F/Y 2066/067

Figure No 4.8

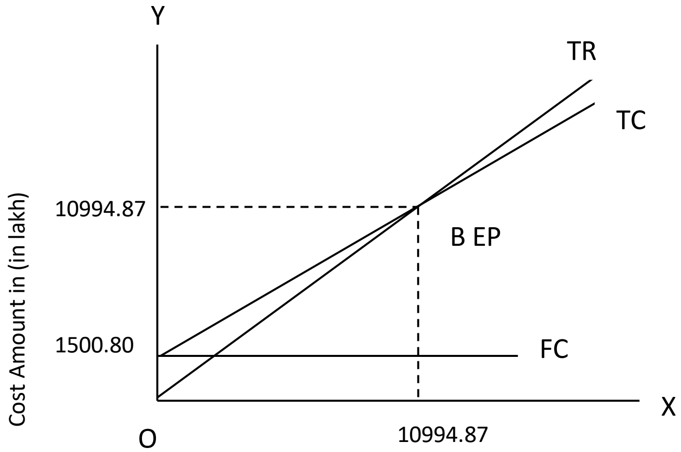
Break even chart analysis of NTL



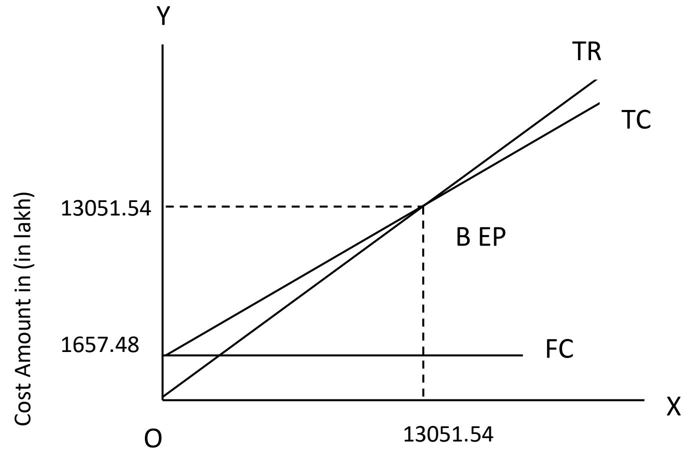
Sales revenue (in Lakh) BEP in Graph for F/Y 2062/063



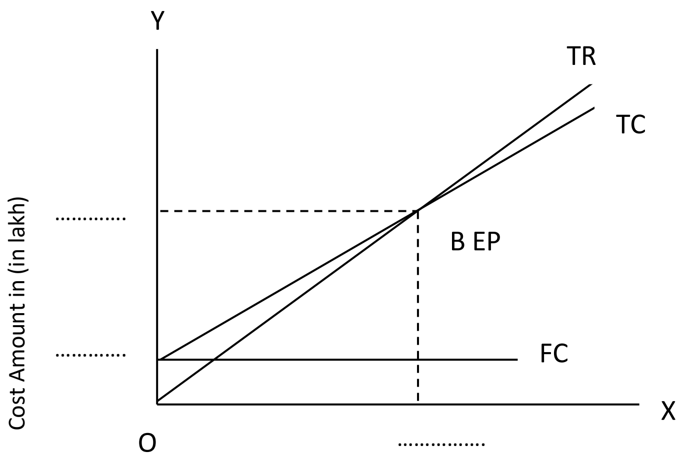
Sales revenue (in Lakh) BEP in Graph for F/Y 2063/064



Sales revenue (in Lakh) BEP in Graph for F/Y 2064/065



Sales revenue (in Lakh) BEP in Graph for F/Y 2065/066



Sales revenue (in Lakh) BEP in Graph for F/Y ....

Causes of Higher BEP

1. Low actual sales and high variable cost

   Since actual sales of each fiscal year were low, this result the lower contribution margin course of higher variable cost.

2. Low CM Ratio

   Since low sales and low contribution margin, the CM ratio was less than 20%. The low CM ratio recovers low portion of fixed costs, this results there were need of high sales revenue to reach at BEP

3. Higher the Fixed Costs

The fixed cost of both companies is increasing every year. Not recover of higher portion of fixed cost results higher BEP for STCL&NTL .

4.6.4 Margin of Safety (MOS) Analysis

The margin of safety (MOS) can be defined as the excess of sales over the break even volume of sales. It states the amount by which sales can drop before losses begin to be incurred in an organization. The formula for its calculation is

- Margin of safety (MOS)= Total Sales-Break Even Sales

it may be mention that the reciprocal of MOS is operating leverage. A high MOS indicate that a firm has got enough risk bearing capacity as measured by variation in sales. Low MOS is the result of high operating cost other factor remaining constant so.

MOS of STCL

- MOS of STCL for FY 062/63 = 18506 - 17688.83 = 817.17 lakh
- MOS of STCL for FY 063/64 = 19162 - 18062.1 = 109.99 lakh
- MOS of STCL for FY 064/65 = 21390 - 19352.13 = 2037.87 lakh
- MOS of STCL for FY 065/66 = 31904 - 29358.50 = 2545 lakh
- MOS of STCL for FY 066/67 = 33663 - 29968.38 = 3894.62 lakhs

MOS of NTL

- MOS of NTL for FY 062/63 = 4075.48 – 7428.83 = (3353.35)lakhs
- MOS of NTL for FY 063/64 = 9686.08 – 27856.22 =(18170.17)lakh
- MOS of NTL for FY 064/65 = 10353.43 – 10994.87 = (641.44) lakh

- MOS of NTL for FY 065/66 = 7356.62 – 13051.45 = (5694.83)lakhs
- MOS of NTL for FY 066/67 = 5617.6 – (58217.01) = 63834.61 lakh

The above calculation shows that MOS of STCL for five FY 062/63 to 066/67 in flauctiong trend. MOS for STCL is maximum in FY 066/67 & minimum in FY 063/64.Where as the MOS of NTL for FY 062/63 to 065/66 are totally negative it means sales doesn't reach the capacity or can't touch the BEP line.

4.6 major finding of the study

From the analysis of various data collected by primary and secondary sources and on the basis of observation and discussion, the following major findings have been drawn:

4.7.1 Major finding from secondary data

Salt Trading Corporation Limited

Secondary data with the help of different finanacial and statistical tools was used to analyze. On the basis of data presentation and analysis some important findings of the study summarized below.

- Total sales of the corporation were fluctuating trends.
- The company sold different products among them agricultural material and machine equipment on total sales were found nominal but other products made highest contribution on total sales.
- Expenses of STCL were fluctuating. Variable cost as well as fixed cost increased or decreased during the period. It has no details of systematic expenses plan .

- From correlation analysis, it was found that there was of positive correlation between sales and net profit. Change in sales made change in profit but change was not in the same ratio.
- This corporation has no lower BEP ratio. Lower BEP indicates straight position of the corporation.
- The higher percentage of MOS ratio indicates that the company is an strong profitability position.
- Contribution margin of the corporation were not stable and satisfactory.
- The profit trend of the company is not satisfactory. As compared to profit, proportion is very low with fluctuating trend.
- Financial position of the company is not so good. Net profit margin, profitability ratios and other things are not satisfactory.

National Trading Limited.

- NTL failed to maintain its periodic performance report for the evaluation of performance to find the underlying causes of poor achievements. It has chaotic record.
- Financial position of the company is not so good. Net profit margin, profitability ratios and other things are not satisfactory.
- The management of NTL applied annual sales and purchase. There is not complete comprehensive budgeting system.
- NTL does not prepare the long term strategic profit plan but prepare short term plan.
- NTL fail to maintain cost classification and cost control program.
- A total expense of NTL is greater than Sales Revenue.

- No proper management to supply goods in rural areas, it has not achieved the sales and purchase due to the lack of autonomy, lack of moral and motivation in employee, intervention by government, not intra and inter department co-ordination, lack of clear cut objective of NTL and top level management are only involved in planning and decision making and lower participation is not encouraged.
- Inadequate evaluation of relevant internal and external markets variables NTL does not take in accounts its weakness and strength to support planned activities.

4.7.2 finding from primary data

The main objective of STCL & NTL is to provide goods to general people at reasonable price in order to get reasonable profit and to act as an agent of the govt. in the matter of import and distribution of goods. Which the govt. has to import and distribute time to time and handle the commodity aid goods received by the government. The main objective of the study is to plan profit and different aspect of planning profits.

- Objective of both companies is not clear.
- Lack of long term plan of both companies.
- Achievements of both companies are satisfied.
- Since the last many years both limited company are suffering from many kinds of abstract. The change of the government gives new mgmt leader to drive the limited.

  The direct interfere in cooperation is the main causes of increasing cost. Comparatively STCL performing well than NTL. But there also over employee is one of the bitterest causes of going the Limited in falling way.

- According to both companies they are taking manage plans to correct their previous weakness, but exactly they don’t know what plan they took. Only they focus their words on providing best facility to customers.
- According to the respondents both Limited performance is not well but the top level are very confident that profit does not measure the performance. According to them the main things is that we providing best services in the competitive market to the customers.

CHAPTER- V

SUMMARY, CONCLUSIO N AND RECOMMENDATIONS

5.1 Summary

As we know that the efficiency and effectiveness of any business organization depends upon formulation of effective plan and its implementation and control. Cost volume-profit analysis is one of the most important tools for the management for profit planning and control over the variation of any. The successful operation of the company or organization , which results out of excess of income over expenditure, which is profit, depends on how effectively the management has formulated plan, how is the co-ordination done and what are the controlling measures for the deviation resulting from the difference from the actual performance and planned performance. CVP analysis plays a vital role for improving the performance of the company by helping in formulating effective profit plan and control without which and organization cannot exist in the important planning tool for the management.

Management effectively achieves organizational objectives through the efficient use of scarce resources in a changing environment .future is uncertain which creates risk and to reduce risk, the only reliable weapon is good management. CVP analysis is an analytical technique for studying the relationship between volume, cost and profit which helps to manage future cost and profit. Profit planning is a management technique and it is a written plan in all aspect of business operation for specific future period. CVP analysis is a device used to determine the usefulness of profit planning process of the firm. In fact, the entire field of profit planning has become associated with CVP relationship

Cost volume profit analysis, a most important tool of profit planning means of predicting the effect of change in cost and sales level on the income of business. In its simplest form, it involves the determination of sales level at which a company neither earns a profit nor incurs a loss or in other word the point at which it breaks even. Often Break even analysis is known as CVP analysis. But break even analysis is a special case of CVP analysis. However, CVP analysis techniques is included to find out sales volume to earn a zero profit or desired profit, to affect income by changes in selling price, to check income if new machine will be installed, to examine operating profit if fixed cost as well as unit variable cost will be change etc. solving such alternatives CVP analysis is more appropriate than break even analysis.

In this way organization may use CVP analysis as planning tool when sales volume unit selling price and variable and fixed cost are known, theb to find out profit, as target profit at certain sales volume. By using CVP analysis tools, the management of the organization can control the costs also.

The objectives behind the research study is to examine the effective of profit planning and control with the help of cost, volume and profit tool in salt Trading Corporation limited and National Trading limited. Focus of this study is to evaluate cost ,volume and profit relationship of STCL and NTL. STCL and NTL has been able to meet the expectation of general public. The secondary and primary data with descriptive and analytical approach were used for cost analysis sales analysis, contribution margin analysis, P/V ratio analysis and break even analysis. STCL and NTL have low contribution margin, low p/v ration, high breakeven point, low margin of safety and correlation coefficient of two variable has positive and negative. It means STCL and NTL conditions is very poor and requires effective improvement in situation.

5.2 Conclusion

Salt Trading Corporation limited

Salt trading in corporation limited could not achieve the goal. various popular profit planning tool like, JIT, Zero based budgeting, CVP analysis were not practiced in salt trading corporation limited. cost segregation in to fixed and variable where not done. The operating and maintenance cost were in rising trend. no specific technique was used till now to control cost or reduce them. Classification of cost was not done on scientific and systematic basis rather they were done on hunches and prediction made by employees. Salt Trading Corporation limited still remained behind for the realistic budgeted and was not been able to practice CVP analysis as a tool to profit planning and control.

The study of CVP of Salt Trading corporation limited shows that the corporation has low and fluctuating contribution margin affecting the profit. Even though corporation's contribution margin has increased by because of increase in sales revenue but the increase in fixed cost has increased BEP to higher level. The increase in sales revenue of the company has also increased profit and safety margin. CVP relationship was not used in STCL while developing sales plan, production plan and pricing strategy. The company is at risky situation since the company has minimum profit in the all fiscal year

Salt Trading Corporation limited control fixed cost and to maximize variable cost profit. The company management needs to take corrective action as soon as possible by controlling cost their behaviors through effective technique, if not Salt Trading Corporation limited to have suffered from further losses in coming years.

Pricing policy of the corporation is the causes of loss. The corporation has not followed any pricing methods. The pricing has made on ad-hoc basis. STCL has not any plan to evaluate the profitability of each product separately. It is not able to drop the loss leader products. There is no clear record of each product's contribution in profit or loss. STCL has not prepared periodic performance evaluation system so that it has not take any corrective action immediately, if any disturbance and obstacle.

STCL do not prepare sales budget, production budget, purchase budget, direct labor budget etc. separately. Due to this planned statement it is difficult to search the variation between actual and planned performance. Job definition, management information system performance base career-development opportunities strategic planning exercise are not well developed. good distribution network is strength point of present study likewise lack of professional, market oriented management decision making system and land lack of proper planning and control system is weakness of the present study.

National Trading Limited

NTL has been suffering from a number of internal and external problem in the formulating and implementation profit plans. The preparation techniques, crafted management and optimal use of resources lead NTL to the unsatisfactory achievement and fluctuation on financial soundness year by year

The following major things have been drawn on the basis of the different analysis observation and informal discussion.

Inadequate evaluation of relevant internal and external markets variables NTL does not take in accounts its weakness and strength to support planned activities. NTL fail to maintain its periodic performance report for the evaluation performance to find the underlying causes of poor achievements. It seems that National Trading limited have low contribution margin, low P\v ratio, high breakeven point and low margin of safety, correlation coefficient of two variable is also negative.

Hence different types of profit planning tools, which are used in academic field, are not found applied by both companies. It shows the gap between the theory and practice. CVP analysis is not applied by both companies as any segregation of cost in fixed and variable, which is hardcore of CVP analysis. Company has no clear cut boundaries to separate cost in to fixed and variable. The classification of cost is not scientific and systematic. So, both companies have not been able to used CVP analysis and make the realistic and smart budget. Low contribution margin, high BEP and low margin of safety of both companies. Over all BEP of both companies are very high as the companies have not provide attention to sell possible. Avoiding CVP analysis tool and not utilizing full capacity, the companies are bearing loss as well as not attaining satisfactory profit. Promoters, directors and staffs of the companies are enjoying by achieving .

5.3 Recommendations

After the details analysis of profit planning of salt trading corporation limited. some suggestion have been recommended on the basis of major findings. To improve the performance of the corporations, it should adopt the comprehensive profit planning from the very beginning to the end. The following actions should be implemented to apply the profit planning concept of the STCL.

- STCL and NTL should formulate clear cut goal, objective, policies, long term plan, strategic program etc.
- Cost should be classified into fixed and variable. These costs are controllable and non - controllable cost. So cost control programs are not effectively applied in STCL and NTL.
- Both companys does not care the quality maintenance of the product, so they should have clear policy to manage it.
- To improved profit planning system in STCL and NTL. Both corporation trained and qualified manpower should be improved for this staff should be properly trained marketing specialist should be appointed to increased present sales volume and to find new profitable potential areas.
- Cash budget and capital expenditure budget should be considered in order proper of cash and investment decision by STCL and NTL.

- Both corporation should consider BEP analysis which preparing sales plan, purchase plan and determine selling price of both companies.
- Some portion of fund should be allocated to research and development programs so that new technology could be found which provide more competitiveness in the market.
- Both companies are trading, so they should have done inventory management clearly with high profitability.
- A systematic approach should be toward comprehensive profit planning. This can considerably contribute to the increase in profitability to companies. Since separate on the cost in to their fixed and variable elements is at heart of CVP analysis, all decision makers sought to be fully aware of and understand, the cost structure of their operation, otherwise CVP analysis will provide meaningless information.
- Participative management should be introduced in formulation of plans and policies of the corporations. BEP planning should also be communicated to lower level of management.

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Websites:

www.salttrading.com.np

www.nationaltrading.com.np

Appendixes

Appendix 1

Income statement of STCL for the year 2062/63to 066/67

(in lakhs)

Particulars	062/063	063/064	064/065	065/066	066/067
A Sales Revenue	18506	19162	21390	31904	33663
B. Variable cost Total variable cost	15920.61	16445.4	18376.31	28135.14	28479.81
C. Contribution margin (A-B)	2585.39	2716.6	3013.69	3768.86	5183.19
D. fixed cost: Total fixed cost	2471.13	2559.40	2724.78	3467.24	4615.13
E. profit (loss) (C-D)	114.26	157.20	288.91	301.62	568.06
F. P/V ratio=(CM/Sales)	0.1397	0.1417	0.1408	0.1181	0.1540
G. BEP =(FC/PV ratio)	17688.83	18062.1	19352.13	29358.50	29968.38
H. MOS= (A-G)	817.17	109.99	2037.87	2545.50	3694.62

Source: Annual report of STCL

Appendix 2

Income statement of NTL for the year 2062/63to 066/67

(in lakhs)

Particulars	062/063	063/064	064/065	065/066	066/067
A Sales Revenue	4075.48	9686.08	10353.43	7356.62	5842.13
B. Variable cost Total variable cost	3266.57	9218.35	8939.62	6472.91	5779.51
C. Contribution margin (A-B)	808.91	467.73	1413.81	883.71	62.62
D. fixed cost: Total fixed cost	1473.88	1342.67	1500.8	1567.48	1676.65
E. profit (loss) (C-D)	(664.97)	(874.94)	(86.99)	(683.77)	(1614.03)
F. P/V ratio= (CM/Sales)	0.1984	0.0482	0.1365	0.1201	0.11
G. BEP in Rs = (FC/PV ratio)	7428.83	27856.22	10994.87	13051.45	15242
H. MOS= (A-G)	(3353.35)	(18170.14)	(641.44)	(5694.83)	(9399.87)

Source: Annual report of NTL