

CHAPTER-I

INTRODUCTION

1.1 GENERAL BACKGROUND

Nepal is a small and land locked country, which is situated in the heart of Asia. People's Republic of China surrounds it on the north and India on the south, east and west. It covers 0.03% land of the world. Its per capita income is 240 US \$. Total area of the country is 147,181sq.km. 25 million people with more than 60 castes / ethnic group are available in the country. It is located between 26.2 degree and 30.27 degree north latitude and 80.4 degree and 88.12 degree east longitude has an average length of 885 km. east-west. The north south width is not uniform. Maximum width is 241 km. in and minimum is 144 km. (Adhikari, 2006:1)

Nepal is a land locked country surrounded by mountains and hills. Geographically, Nepal is divided into three regions on the basis of its physical features. The Himalayan region consist area ranging from 1877m to 8848m above sea level; embraces eight of earth's tallest mountain peaks. So there is sparse human habitant in this region and occupy only about 19% of the total area of the country. The terai region consists of nearly 23% of total area. About 40% area of this region is under cultivation. Population in this region constitutes 46.7% of the total population of the country. The hilly region covers about 42% of the total area. Only 10% area of the region cultivated. (Adhikari, 2006:1)

Nepal has a mixed economy. It is majorly dominated by agriculture. But in recent year the non agriculture sector is contributing more in G.D.P. than the agriculture sector. Public & private manufacturing industries were established with the objective of balanced regional development, public welfare, employment generation, import substitution and the export promotion for dissemination of the development activities according to national priority. (Adhikari, 2006:1)

For the economic development of Nepal participation of agriculture, industries and trade sectors are essential. Nepal Government has adopted the concept of economic liberalization in practice and applied the mixed economy, and Policy of permitting 100% foreign investment for large and medium scale industries. Government has already adopted one-window policy to facilitate the industrial investment. It determines the

scope of private sectors participation in business and economic activities Liberalization provides the opportunities for the competition in the open market and then to investment and joint collaboration for industries and business activities it extends the role of trading enterprises in economic development. The mixed economy is a mix of free market and centrally planned economies where public and private sector co-exist. But for the proper growth of industries sufficient infrastructure is a must. Various public enterprises established during the planning era are not in good condition. Frequent changes in government policies are one of the basic reasons for the negative performance of industries. Thus, clear and simple policies providing definite facilities for a longer period of time are the primary requisites for industrial development. (Adhikari, 2006:2)

General Introduction of Organization under Study

Salt Trading Corporation Limited (www.stcnepal.com)

The controllable transaction of salt in our country has resulted in the artificial lacking of salt from time to time .Moreover , the unnecessary increasing in price of salt , trend of selling inedible salt to customer had also increased . Country couldn't supply edible salt to its entire people.

Salt trading has been serving its customer's very honestly and continuously right after establishment. The quality and price of salt is very good even to poor income group. Moreover the corporation has also assured to its customer about the quality supply of its products with reasonable price. Corporation has already established 93 branches and sub branches in 75 districts .and distribution chain has very effectively been made throughout the country along with branches, and sub branches and about 6000 dealers. Corporation has also a long experience in trading of basic goods.

The main features of STCL are to provide highly qualitative salt with reasonable price to its people all over the country whole year. Corporation is importing salt from India annually and is selling to her customer in 40% less price than in India. Besides salt, corporation has supplied other various products to her customer. STCL provides edible service to organization.

Corporation has maintained the supply of following goods.

- i. Edible goods : salt, ghee , sugar , flour, rice'

- ii. Other goods: lubricant, coal, Cement, Tractor & Metal Detector.
- iii. Mixture of nutrition: in order to avoid the badness seen in public health, corporation has mixed the following nutritious elements in edible goods.
 - a) Iodine is mixed in salt
 - b) Vitamin 'A' and 'D' in vegetable ghee and oil respectively
 - c) Iron in flour
- iv. Agriculture center: salt trading corporation has set up trading and agriculture center in different parts of the country to provide qualitative agriculture goods like chemical fertilizers, insecticides, hybrid seeds, equipments to the people. Now it has served only 25% people but in near future, corporation has mission to extend its service throughout the country.

Future program of STCL (Annual Report of STCL in 061/62:8)

1. It is assumed that establishing the corporation as a responsible agency by following N.G. rules and regulations, it will be established in international market by providing quality products in home country and foreign. For that purpose new product development, search and extension of new markets, market diversification will be done. In this process establishment of salt trading agricultural development center, export of vegetable and fruits in international trade, co-action with N.G. Corporation, and establishment of branch at other countries are being searched by the corporation.
2. Nepal Food Corporation and Nepal Banaspati Ghee Company are facing loss. So, alternatively it will manage necessary plans and ideas in the near future by the corporation.
3. GON has provided equal credit amount to Butwal thread industry Ltd. So that it paid the loan to its financial institution and according to the decision of GON the industry will be handled over the corporation (STCL) in a separate contract.
4. The management of Gorakhkali Rubber Industry Ltd. is cared by the Corporation, so to make the industry self-dependent, corporation will manage to operate. This industry in independent way but corporation will be out from the responsibility of contract management. The corporation will help the industry in technical and financial problems and also in production of tyre. The corporation will do joint-

- venture agreement with reputed Modi Group Company of India and industries of Nepal.
5. Most of Nepalese people are inhabited in the village so they are not able to take advantages from scientific advantages. So the corporation is serving them by providing preventive medicine by producing iodine salt, ghee and oil with vitamin 'A' and 'D' flour with iron.
 6. According to the policy of corporation for coordination with GON Corporation, STCL is trading with national trading Limited for the product of sugar and chemical fertilizers. Regarding these corporations has started export of raw sugar to the European Union from 2003 and it is trying to trade rice and wheat with Nepal Food Corporation.
 7. All the debtors of the corporation are in receivable position. Advance, borrowing and deposit funded to other subsidiary companies are trying to be collect as soon as possible until these receivable amounts will be collected satisfactorily; all the reserves and funds will not be disturbed as bonus, share, dividends and right share.
 8. It is under consideration that Morang Sugar Company will be reconstructed for operation with new plants and machinery by the corporation.
 9. In the current year corporation has established a investment fund with the amount of Rs. 3 crore, so the investment on share made by the corporation to the other companies which was evaluating at cost price will be changed according the suggestion of shareholders, and the price fluctuation will be maintained from the fund.
 10. In the critical and competitive situation with the National Finance co. Ltd, the corporation has succeeded to provide 20% dividend in the past years as a bonus .

National Trading Limited

Trade is one of the major aspects of the national economy. The efficient administration of trade is one primary responsibility of the national government. As trade sector involves imports and exports, both aspects assume importance for the economic development of the country. Imports are made fo materials and consumers' goods, which cannot be produce within the country, or which are not available adequately within the country. On

the production for the purpose of earning the much needed foreign exchange. Naturally a developing country like Nepal would need the presence of several agencies both in the public and private sector to coordinate the above activities and manage its trade efficiently. (Thapa, 2006:2)

National Trading Limited is under the Ministry of Commerce of 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, programmes and policies. The Chairman and the General Manager are responsible for the appropriate execution of the plans, programmes and policies formulated and decided by the Board. The chairman and the board member are all appointees of GON. (Thapa, 2006:2)

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. (Thapa, 2006:3)

NTL's organization structure has undergone continuous change as per the increasing volume of trading activities, 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 a 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. (Thapa, 2006:3)

NTL's business activities are as follows: (Thapa, 2006:4)

- Supply of small scale industrial machinery, agricultural machine/equipments hand and power tools and spare parts.
- Gasoline and diesel generators, alternators.
- Single phase electric motors in 4 and 6 poles from 1/8 H.P. to 5 H.P. and three phase electric motors in 4 and 6 poles from 1/2 H.P. to 75 H.P.
- Vacuum cleaners, irons, rice cookers fans etc.
- Color and black and white televisions of 14", 19" and 21".

- Supply of essential goods for economic development like durable construction and industrial raw materials at reasonable price.
- Power tools such as hand drills, starry hammers, impact drills, magnetic drills, angle grinders, planners' circulars saws, marble cutters, flexible shaft grinders etc.
- Electric radiators, switches, starters, fuse kitkats etc.

Major essentials consumer goods include sugar, tea, blankets, fabrics, and shoe imported, duty paid whiskey and drinks, genuine imported whiskies rums brandies gins, liquors, cigarettes, perfumes, watches, jewelry, gift items, confectioneries etc. for the bounded ware house and duty free shops.

NTL'S Role in the National Economy (Thapa, 2006:6)

NTL through its trading activities has to fulfill economic and social responsibilities entrusted to it in the country. NTL has its social responsibility to maintain regular supply of daily necessity goods at reasonable price throughout the country. NTL again has the responsibility to fulfill the needs of the economic sectors like agriculture and industry by making available industrial machinery and raw materials and at a reasonable price.

NTL has rendered support services to the development of tourism by providing duty free goods like whisky, beer, liquors, cigarettes, tobacco, cigars, perfumes etc. through its bounded warehouse and duty free shop to persons with duty free privilege as well as to out-going and in-coming tourists.

NTL has assisted to various national development projects as roads, buildings, factories etc. directly/indirectly by making available of development goods (cement, iron rods, corrugated sheets, machinery's and so on) as well as to make available local expenses for different development projects from the proceeds of commodities aid.

Through a long accumulated experience of about quarter century, NTL has experts in handling imports by engaging in imports and other activities related to import performance.

NTL has taken part in regional and international trade fairs and exhibitions in order to identify potential market for import and export. NTL has established its business contracts with government and private trading entities in the people's republic of China,

USSR, India, Pakistan, Bangladesh, Bulgaria, North Korea, South Korea, Thailand, Honking, Japan, Singapore, Federal Republic of Germany, United Kingdom, France, Italy, and the United States of America.

1.2 STATEMENT OF THE PROBLEM

In the context of Nepal corporations are still in infancy position. Through the government in respect of industrialization announces various attractive and liberal policies, new establishment on public corporations in not satisfactory. The financial performance of established corporations is poor.thry are operating in losses. There may be various and different reasons for the poor performance of the public corporations. Such reasons should be investigated and taken corrective action for the improvement in their performance.

STCL and NTL are 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. Since it has passed a long journey. The profit and loss trend of the company is lowest.

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 sectors 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 sectors. Some of the problems facing by the trading corporation are follows:

-) Limited market opportunities.
-) Insufficient emphasis on the effective planning.
-) Lack of efficient resources utilization.
-) Unsatisfactory financial performance.
-) Inadequate HRD efforts.
-) Open border.
-) Political interferences.
-) Limited infrastructure and facilities.

-) Lack of sufficient capital and secure environment for investment.
-) Low level of return.

STCL and NTL are the trading enterprises, which has been operating at a profit but the growth of return has not been improving. To solve this in the above context profit planning system is necessary. The following are the problems to be taken into consideration in this study:

- a) Do they plan for profit?
- b) Do they have various functional budgeting systems as an integral part of profit planning?
- c) Is there appropriate planning system adopted by STCL and NTL?
- d) What is the Overall trend of profit in STCL and NTL?
- e) What is the basis for sales forecasting and its achievements?
- f) What steps should be taken to strengthen the profit performance of STCL and NTL?

1.3 OBJECTIVES OF THE STUDY

The main objective of the study is to find out practical application of Profit Planning and Control in trading enterprises. The specific objectives are as follows:

-) To study and analyse the functional budgets of Salt Trading & National Trading Limited.
-) To evaluate future sales and profit trend of Salt Trading Corporation Limited and National Trading Limited.
-) To examine various accounting ratios to measure the profitability and efficiency of the concerned organization under study.
-) To point out valuable recommendations and suggestions based on analysis.

1.4 SIGNIFICANCE OF THE STUDY

The present study highlights about the application of detailed and systematic budgeting in Nepal, especially in NTL & STCL. The study also highlights and analyse the problems and prospects in budget application and implementation. The study also examine and review the present and historical literature to bridge the gap between the literature exploring to attain PEs and private limited objective to apply the comprehensive profit

planning and control system and provide the management of NTL & STCL. The necessary theory as well as contemporary situational conception to make appropriate decision-making in this regard. Besides this facts, the study will be useful though there have been a few of study conducted regarding profit planning. A volatile environment seeks to achieve innovative and dynamic and more useful information about the approach and practice, so as to highlight the broad and specific facts to related fields. In the context of Nepal, very few studies and research have been made in respect of budgeting and profit planning of Nepalese public enterprises with the special case of NTL & STCL, we can not found any comparative study between these two trading enterprises in the sphere of profit planning and control, hence therefore this study holds some importance in this. Besides this above all; the present study will help the general interest and minimise curiosity of various interested people and as well as this study will help to overcome the certain limited problems regarding budgeting activities.

1.5 LIMITATIONS OF THE STUDY

The study is confined to profit planning and control of National trading limited and Salt Trading Corporation Limited. Having reliable and sufficient data and necessary alternative constraints, the limitations of this study are as follows:

-) This study covers the analysis of the last five years only from the fiscal year 2060/61 to 2064/65.
-) Analysis is concentrated on some managerial, financial and accounting aspects and it doesn't cover the other areas of NTL & STCL. The study based on primary data as well as secondary data covering interview, financial statement, published books etc.
-) Due to limited time and resources constraints, this study is neither the comprehensive nor the extensive.
-) The main concern of this study is to cover the present managerial status in terms of their profit planning and control as well as corporate system.

1.6 ORGANIZATION OF THE STUDY

The study is divided into the following five chapters:-

Chapter I: This chapter consists of background of the study, statement of problem, objective, significance of the study, limitations of the study and organization of the study.

Chapter II: This chapter deals with introduction of NTL and STCL application of planning, importance scope & limitations of PPC, role of management, role of sales planning in PPC. Corporate planning and profit planning, strategic management and profit planning, role of forecasting in planning. Strategic & tactical sales plan and brief sketch of previous research work.

Chapter III: The third chapter of the study consists of research design. Sources of data, period covered data processing procedure, tools and techniques of analysis used.

Chapter IV: In the fourth chapter data presentation, interpretation analysis of data is made with help of selected tools and techniques. Major findings are drawn on the basis of analysis of data.

Chapter V: This is the last chapter of the study. The whole picture of the study has been presented in a summary. This part consist issues and gaps: action plans and put forward recommendations to improve the existing situation.

CHAPTER-II

REVIEW OF LITERATURE

As it is clear that scientific research must be based on past knowledge, the previous studies cannot be ignored because they provide the foundation to the present study. In other words, there has to be continuity in research. This continuity in research is ensured by linking the present study with past research studies. So, this chapter covers the review of available literature as well as attempt is made to discuss briefly about the theoretical concept regarding the profit planning and control.

The present chapter i.e. the review of literature has been classified in to the following two categories;

-) Conceptual Review
-) Review of Previous Studies

2.1 CONCEPTUAL REVIEW

The growth of success of every organization depends upon the profit earned by it. Usually profit does not just happen. Profit is the output of well-managed activities. When management performs its activities in an organized manner in lieu of profit it is known as profit planning. Profit planning is a major part of overall planning process of an organization. It is the plan of the firm's expectation and it is used as a basic of measuring the actual performance of managers and their unit. Profit planning is a comprehensive and coordinated plan expressed in financial terms for the operation and resources of an enterprise for some specific period in the future.

Profit: - Profit is the primary measure of success of all business enterprise. Although in modern days many alternatives objectives of firm has been mentioned, but nobody has been able to completely wipe out the profit maximization objective or the objective of earning reasonable rate of profit. Profits are the main test of business enterprise's performance. Simply profit starts from the excess of income over the cost of production. But the term 'profit' is very controversial and there is several different interpretation about this "an economist will say that the profit is the reward of entrepreneurship for risk taking". Source (joeldean 1995; 141-142) A labor leader might say that it is the measure

of how efficiently labor has produced and that it provides a base for determining income tax. The accounts will define it simply the excess of firm's revenue over expenditure. Management thinks profit as;

A tangible expression of the goals it has set for the firm,

- a) A measure of performance toward the achievement of goals,
- b) A means of maintaining the health, growth and continuity of the company.

“Economist theories on profits may be put in three broad groups. The first looks upon profit as the reward for bearing risk and uncertainties; the second views of profit as the consequence of frictions and imperfection in competitive adjustments of the company to dynamic changes; the third sees profit as the reward for successful innovation.(Dean, 1977:6)

“Profit is the reward for bearing risk, of enterprise, the risk of venturing in business, the risk of owning sometimes in hope of selling it later.”(Myres, 1984: 250) However all the economists do not agree that profits arise due to risk and uncertainties?

“For the dynamic manufacturing industries”. The most telling concept of profits depicts them as the gains in national income that are generated by the managerial drive for distinction through creative innovation.”(Dean, 1977:12) F. B. Hawley defines ‘profit’ as the reward for taking business. F. h. knight provides the view that it is because of uncertainty bearing, which arises in the economy. Schumer opines that an entrepreneur earns profit as reward for his introducing innovations. J. m. Keynes held the view that profits resulted from favorable movements of general price level.

“Profit is the primary objectives of a business .In view of heavy investment. Which is necessary for the success of most enterprises, profit in the account sense tends to become a long term objective, which measure not only the success of product but also of the development of market for it.”(Kulkarni, 1985:245)

It is quite clear that there is no exact definition of profit. Whatever the definition may be, profits are residual income left after the payment of the cost of factors of production. The success of business depends largely upon the profit earn or surplus increased by the business. The efficiency of the management is reflected upon the volume of profits/surplus of the business. The survival measure of how well a business performs

economically. Profit is a signal for the allocation of resources and yardstick for judging managerial efficiency.

Planning:-

Many firms and companies use a format planning, which determines long range, short range and their range decision for running the overall business. The terms and conditions are evaluated in terms of their financial impact on the business organization and plans are expressed in financial terms. It is the statement of organizations and overall activities of coming periods. It is developed by top executives considering general economic conditions, anticipates conditions of industries competitive considerations etc. plan is the understanding agreement between all functional departments. It is no/t developed in detail by specifying timing of activities for execution. “To plan is to look ahead and chart out of future courses of operations. It is the determination of a course of action to achieve a desired result.”(Kulkarni, 1985:187)

Planning as a tool of developing and achieving the organizational objectives. “Planning is a process of developing enterprises objectives and selecting a future course of action to accomplish them. It includes establishing enterprises objectives and selecting a future course of action to accomplish them. It includes establishing enterprises objectives, developing premises about the environment in which they are to be accomplished, selecting a course of action for accomplishing the objectives including activities necessary to translate planning to be current deficiencies.”(Welch, Hilton & Gordon, 1992:3)

Profit Planning

According to the website investopedia i.e. www.invest/profitplanning/123th.com with a well-considered profit plan, out-of-line conditions can be detected at the earliest possible date. Corrective action can be taken promptly, eliminating the erosive effect of continuing losses as well as the need to react in a time of crisis. The profit plan also permits the owner to agree upon specific responsibilities with all employees who are in a position to influence sales or costs. Their performance can be evaluated and any deficiencies brought to their attention so that they can participate in the development of corrective action plans. As a further plus, the disciplined thinking about the future will permit you to foresee many problems before they occur and assist you in anticipating

opportunities in your market that will permit you to build your business for greater sales and profit.

Profit planning is simply the development of your operating plan for the coming period. Your plan is summarized in the form of an income statement that serves as your sales and profit objective and your budget for cost.

How Is It Used?

The profit plan is used in the following ways:

) **Evaluating operations.** Each time you prepare an income statement, actual sales and costs are compared with those you projected in your original profit plan. This permits detection of areas of unsatisfactory performance so that corrective action can be taken.

) **Determining the need for additional resources such as facilities or personnel.** For example, the profit plan may show that a sharp increase in expected sales will overload the company's billing personnel. A decision can then be made to add additional invoicing personnel, to retain an EDP service, or to pursue some other alternative.

) **Planning purchasing requirements.** The volume of expected sales may be more than the business' usual suppliers can handle or expected sales may be sufficient to permit taking advantage of quantity discounts. In either case, advance knowledge of purchasing requirements will permit taking advantage of cost savings and ensure that purchased goods are readily available when needed.

) **Anticipating any additional financing needs.** With planning, the search for needed funds can begin as early as possible. In this way, financial crises are avoided and financing can be arranged on more favorable terms.

Advantages of Profit Planning

Profit planning offers many advantages to your business. The modest investment in time required to develop and implement the plan will pay liberal dividends later. Among the benefits that your business can enjoy from profit planning are the following:

) **Performance evaluation.** The profit plan provides a continuing standard against which sales performance and cost control can quickly be evaluated.

) **Awareness of responsibilities.** With the profit plan, personnel are readily aware of their responsibilities for meeting sales objectives, controlling costs, and the like.

) **Cost consciousness.** Since cost excesses can quickly be identified and planned, expenditures can be compared with budgets even before they are incurred, cost consciousness is increased, reducing unnecessary costs and overspending.

) **Disciplined approach to problem-solving.** The profit plan permits early detection of potential problems so that their nature and extent are known. With this information, alternate corrective actions can be more easily and accurately evaluated.

) **Thinking about the future.** Too often, small businesses neglect to plan ahead: thinking about where they are today, where they will be next year, or the year after. As a result, opportunities are overlooked and crises occur that could have been avoided. Development of the profit plan requires thinking about the future so that many problems can be avoided before they arise.

) **Financial planning.** The profit plan serves as a basis for financial planning. With the information developed from the profit plan, you can anticipate the need for increased investment in receivables, inventory, or facilities as well as any need for additional capital.

) **Confidence of lenders and investors.** A realistic profit plan, supported by a description of specific steps proposed to achieve sales and profit objectives, will inspire the confidence of potential lenders and investors. This confidence will not only influence their judgment of you as a business manager, but also the prospects of your business' success and its worthiness for a loan or an investment.

Limitations of Profit Planning

Profit plans are based upon estimates. Inevitably, many conditions you expected when the plan was prepared will change. Crystal balls are often cloudy. The further down the road one attempts to forecast, the cloudier they become. In a year, any number of factors can change, many of them beyond the control of the company. Customers' economic fortunes may decline, suppliers' prices may increase, or suppliers' inability to deliver may disrupt your plan.

The profit plan requires the support of all responsible parties. Sales quotas must be agreed upon with those responsible for meeting them. Expense budgets must be agreed

upon with the people who must live with them. Without mutual agreement on objectives and budgets, they will quickly be ignored and serve no useful purpose.

Finally, profit plans must be changed from time to time to meet changing conditions. There is no point in trying to operate a business according to a plan that is no longer realistic because conditions have changed.

Advantages vs. Disadvantages

Despite the limitations of profit planning, the advantages far outweigh the disadvantages. A realistic plan, established yearly and re-evaluated as changing conditions require will provide performance guidelines that will help you control every aspect of your business with a minimum of analysis and digging for financial facts.

Factors Affecting Sales

After categories have been selected and current sales divided among them, the various factors which can affect sales in each category must be considered. These factors could be either internal or external. Internal factors are those that you can influence. External factors are those that affect the market served by your business, but are generally beyond your control.

Internal Factors

The following are typical internal factors that could influence your sales forecast:

-) Promotional plans
-) Expansion plans
-) Capacity restrictions
-) New product introductions
-) Product cancellations
-) Sales force changes
-) Pricing policy
-) Profit expectations

-) Market expansion to new customers or territories

External Factors

Among the external factors that must be considered are the following:

-) Business trends
-) Government policies
-) Inflation
-) Changes in population characteristics
-) Economic fortunes of customers
-) Changes in buying habits
-) Competitive pressures

2.1.1 Profit Planning and Control:-

Profit planning and control is one of the comprehensive approaches that has been developed to facilitate effective performance of the management process it is a systematic and formalized approach for performing significant phases of the management planning and control functions. It includes the following activities:

1. Development and application of broad and long term objectives of organization.
2. Specifications of organizational goals.
3. Development of long run profit plan in broad terms.
4. Development of short- term profit plan detailed by assigned responsibility.
5. Follow up procedure.

Therefore the functional concept of PPC that which includes all activities and tasks, which must carried out for achieving maximum result. Therefore the fundamental concepts and features of profit planning and control system are as follows:

-) PPC is a managerial process that includes planning, organizing, staffing and controlling.
-) It is a process of achieving managerial commitment from all levels through participation for effective management.

-) It is clearly specifies assignment of authority and responsibility at all organizes level which forms the organization structure.
-) It is a plan, which includes both long term, and short term plans.
-) It is a continuous process of feed forward feedback and follow up and preplanning through upward and downward communication channels.
-) It is the continuous and consistent process for coordinating all management functions.
-) It is management control process through reporting. (fremgen,1973:144)

2.1.2 Basic Elements of Profit Planning and Control:-

The basic elements of profit planning and control are:

-)It is a comprehensive and coordinated plan.
-)It is expressed in financial terms.
-)It is a plan for the firm's operations and resources.
-)It is a future plan for a specific period. (Fago, 2003:110)

2.1.3 Essential of Profit Planning:-

The successful and sound planning and budgeting system is based upon certain pre-requisites. These pre-requisites represent management attitude, organization structure and managerial approaches necessary for the effective and efficient application of the budgeting system. The following are some important essentials are fundamentals and a successful profit planning of budgeting: (Pandey, 1999:239)

1. Top management support.
2. Clear and realistic goals.
3. Assignment of authority and responsibility.
4. Creation of responsibility center.
5. Full participation.
6. Effective communication.
7. Budget education.
8. Adaptation of the accounting system.

2.1.4 Objectives of Profit Planning

Simply stated, the process of preparing and using budgets to achieve management's objectives is called budgeting. More specially, a comprehensive profit planning and controlling of budgeting is a systematic and formalized approach for stating and communicating the firm's expectations and accounting the planning, co-ordination and control responsibilities of management in such way as to maximize the use of given resources. It is a management technique in fact it is the way of managing. According to Decoster D. T. and Schafer, e. I. the major purpose or objectives of profit planning are: - (Decoster & Schafer, 1976:422)

- To communicate expectations in clear and formal terms to avoid confusion and to facilitate their attainability.
- To provide a detailed plan of action for reducing uncertainty and for the proper direction of the individual and group efforts to achieve goals.
- To co-ordinate the activities and efforts in such a way that the use of resources is maximized.
- To provide a means of measuring and controlling the performance of individuals and until and to supply information on t he basis of which the necessary corrective action can be taken.
- To state the firm's expectation in clear and formal terms to avoid confusion and to facilitate their attainability.

2.1.5 Fundamental Concept of Profit Planning and Control

The fundamentals are concerned with the effective application of the theory of management process. Welsh, Hilton and Gordon viewed that fundamental concept of PPC includes the underlying activities or tasks that must generally be carried out to attain maximum usefulness from PPC. The mechanics of PPC involved activities as the design of budget schedules, routine and repetitive computations and clerical activities related to a PPC as the following:

1. "A managerial process that includes planning, organizing, staffing, leading and controlling,
2. A management planning process,
3. A strategic (long-range) profit plan,

4. A tactical (short-range) profit plan,
5. A continuous and consistent coordination of all the management functions,
6. A managerial commitment to effective management participation by all levels in the entity,
7. A responsibility accounting system,
8. A continuous use of the expectation principle,
9. An organization structure that clearly specifies assignment of management authority and responsibility at all organization levels.
10. Continues fed forward, feedback. Follow-up and re-planning through defined communication channels,
11. A management control process,
12. A behavior management program.”(Welsch, Hilton & Gordon, 1992:32)

2.1.6 Components of profit planning and control:

Welsh, Hilton and Gordon have presented the components of PPC. A PPC program should have all its components that are required to fulfill the objectives. Which are supposed to be fulfilled by PPC program? Following are the PPC components:

- A. The substantive plan:
 - a) Broad objectives of the enterprises
 - b) Specific enterprise goals
 - c) Enterprise strategies
 - d) Executive management planning instruction
- B. The financial plan:
 - a. strategic long-range profit plan
 - i) Sales, cost and profit projections
 - ii) Major projects and capital additions
 - iii) Cash flow and financing
 - iv) Personal requirements
 - b. tactical short-range (annual) profit plan
1. Operating plan:

Planned income statements

-) Sales plan
-) Production(or merchandise purchase) plan
-) Administration expenses budget
-) Distribution expenses budget
-) Appropriation-type budgets (e.g. research and development, promotion, advertising)

2. Financial position plan

Planning balance sheet

-) Assets
-) Liabilities
-) Owners equality

3. Cash flow plan

- a) Variable expenses budget output expenses
- b) Supplementary data (e.g. cost-volume-profit analysis)
- c) Performance reports (including any special reports) each month end and as needed.
- d) follow up, corrective action and preplanning reports.

2.1.7 Preparation of profit plan

A comprehensive planning and budgetary system will generally include

- i.Sales budget
- ii.Production budget
- iii.Purchase budget
- iv.Cash budget
- v.Perform financial statement
- vi.Capital expenditure budget

2.1.7.1 Sales Plan or Budget:-

The sales budget shows the quantities of each product that the company plans to sell and the intended selling price. It provides the prediction of total revenue from which cash receipts from customer will be estimated and it also supplies the basic data for constructing budget for production Cost and selling distribution and administrative expenses. The sales budget is therefore the foundation of all other budgets since all expenditure is ultimately dependent on the volume of sales. If the sales budget is not accurate the other budget estimates will be unreliable.

A comprehensive sales planning includes strategic and technical sales plan. The purpose of comprehensive sales plan is as follows:-

- It incorporates management judgment and decision in planning process.
- It reduces future uncertainty about future revenue.
- It facilitates management to control of sales utilities.
- It provides necessary information for other parts of PPC.

Development of comprehensive sales plan Welsch, Hilton and Gordon (1999) defines the following steps for the development of comprehensive sales plan.

Step 1: develop management guidelines for sales planning.

Step 2: prepare sales forecast

Step 3: assemble other relevant data.

- i. Sources of raw materials and supplies.
- ii. Manufacturing capacity.
- iii. Capacity availability.
- iv. Availability of key people and labor force.

Step 4: develop the strategic and tactical sales plan. There are four different participative approaches widely used in the process of developing a sales plan.

- i. Sales division managers composite (participations limited to managers only).
- ii. Sales forecast composite (maximum participation).
- iii. Executive decision (participation limited to management).

- iv. Secure managerial commitment to attain the goals in the comprehensive sales plan.
- v. Statistical approaches.

Strategic and tactical sales planning

Strategic and tactical sales planning are the two separate but related plans of a comprehensive sales plan. The strategic sales plan is the long term sales plan and covers a period of 5 years to 10 years time period and mostly it covers the period of one year.

Strategic long term sales plan is developed as one of the first step in the overall completion process of comprehensive profit planning. Strategic sales plans are usually developed as annual accounts. This plan uses broad grouping of product lines with separate consideration of major and new products and services. It involves in depth analysis of future market potentials that may be built from a basic foundation such as changes in population state of the economy. Industry projection and finally company objectives strategic plans usually involve such areas as long term prior policy, expanding and development of new products, new marketing directions, and evolution in distribution channels.

Tactical sales plan is prepared to plan sales for the twelve months into the future detailed by time, product of territory reason or sales person such plan subject to review and revision on a timely basis and usually developed in terms of physical units and in sales account.

2.1.7.2 Production Plan or Budget:

Production budget incorporates the estimates of total volume production with the scheduling of operation by days, week and month. The responsibility for the preparation of production and operation budget with production manager. The production budget normally prepared in quantative terms such as unit and output tones of production etc.

This budget is based on previous requirement of sales department as well as normal inventory requirement. Moreover major change in the sales policy and inventory policy are also taken in account. Such change would reflects on sales budget and sales budget should be used as basis for production estimates and forecast (gupta 1996; 541-542).

2.1.7.3 Purchase Budget

After having prepared the production budget the material usage and purchasing budget can be easily constructed. The material usage depends upon the level of production and the level of opening stock and desired closing stock. The units of materials to be purchased can be determined as follows. (Welch, Hilton & Gordon, 1992:214)

$$\text{Purchase (units)} = \text{budgeted usage} + \text{desired closing stock (material)} - \text{opening stock}$$

Material purchase budgets include the following sub budgets:

1) Material budgets:

Planning and controlling of the required quantities of raw material and parts for production budget is material and parts budget. Generally the quantities of raw material and parts are shown by the time product and responsibility center. It can be calculated as follows:

$$\text{Material budget} = \text{production budget} * \text{standard usage rate}$$

2) Purchase budgets:

Material purchase budget is prepared with considering inventory policy of materials and parts. This budget specifies the quantities and timing of each Raw materials to be purchase accompanied by estimated cost and shows required delivery dates. It can be calculated as follows:

$$\text{Purchase} = \text{material usage of raw material} + \text{closing stock of raw material} - \text{opening stock of raw materials}$$

3) Material inventory budget:-

Material inventory budget refers the budgets level of material and parts in terms of units and cost. In the other words, material inventory budgets deals with the differences between required quantities budget and purchase units budget. It can be compute as follows:

$$\text{Closing stock of raw material} = \text{opening stock of raw material} + \text{purchase of raw material} - \text{material usage of raw material}$$

4) Cost of material usage budget

Cost of material and parts budget is planned cost of material and parts used in production process. It should be computed as follows:

*Material cost = material usage * material cost per unit*

2.1.7.4 Labor Budget:-

A direct labor budget can be prepared from the data given in the production budget. The direct labor hour to be spent depends on the units to be produced and the labor hours required per unit of production.

Planning and controlling direct labor refers the area of personal needs, recruitment, job description and evaluation, performance evaluation union negotiations and wages and salary administration. Direct labor cost occupies significant portion of total production cost. Therefore labor cost need systematic planning and control.

Development of labor budget:

According to Welsch, Hilton and Gordan (1999) the following three steps are taken when developing a labor budget. (Welch, Hilton & Gordon, 1999:187)

- Step 1. Estimate the standard direct labor hours required for each unit of each product, and then estimate the average wages rate by department, cost center or operation. Multiply the standard units of output planned for the department cost center or operation by the unit direct labor cost rate to obtain the total direct cost by product.
- Step 2. Estimated ratio of direct labor cost to some measure of output that can be planned rationalistically.
- Step 3. Develop personnel tables by enumerating personnel requirements for direct labor in each responsibility center.

2.1.7.5 Selling and Distribution Overhead Budget

Selling and distribution overhead includes the all cost relating to selling, distribution and delivery of products to customers. This cost is fixed percentage of total expenses. Careful planning of such expenses affects the profit potential of the company. Top marketing executives are directly responsible for planning the optimum economic balance between:

- i. Sales budget
- ii. Advertisement budget

- iii. Distribution expenses budget sales advertisement and distribution expenses are three separate problems in profit planning and control.(Basnet,2004:33)

2.1.7.6 Administrative Expenses Budget

All those expenses other than manufacturing overhead and distribution expenses are administrative expenses. They are incurred in the responsibility centers that provide supervision and service to all function of the enterprises rather than in the performance of any one function. It includes large portion of fixed cost than variable cost. (Basnet, 2004:33)

2.1.7.7 Cash Budget

Cash budget is the most important component of financial budgets. A good management would keep cash balance at optimum level, too little cash endangers the liquidity of the company and too much cash affects on profitability. The major objectives of the cash budget is to plan cash in such way that the company always maintains sufficient cash balance to meet the needs and use the idle cash in the most profitable manner.

To plan and control the cash assets of the enterprises is one of the important responsibilities of management. The following points should be taken into consideration for effective planning and controlling cash flow and financing. (Fago, 2003:203)

- Right quality for liquidity.
- Right quantity of money.
- Right time for solve.
- Right sources of cash
- Right cost of capital.

A cash budget shows the planned cash inflows, outflows and ending position by interim periods for a specific time span. Most companies should develop both long term and short term plans about their cash flows. The short term cash budget is included in the annual profit plan. A cash budget basically included two parts:-

- The planned cash receipts
- The planned cash outflows

2.1.7.8 Capital Expenditure Budget:-

Capital expenditure budgeting is a process of planning and controlling of the long term and short term expenditure for expansion, replacement and contraction of fixed assets. Capital budgeting is useful to earn future profit and reduce future costs purchase of property, plant, equipments, building and patent are the examples of capital expenditure. According to I. M. Pandey (1999) the following five phases of capital expenditure planning and control can be identified. (Pandey, 1999:618)

- i. Identification of investment opportunities
- ii. Development of forecasts of benefits and costs.
- iii. Evaluation of the net benefits
- iv. Authorization for progressing and spending capital expenditure
- v. Control of capital projects.

In capital expenditure budget, major projects are separately analyzed, planned, approved and rejected co completed and controlled. Therefore capital expenditure budget is primary composed of a series of identified projects related to specific time dimension.

In order to evaluate alternative projects it is important to gather relevant information. The information must be reliable, accurate and relevant to reach decision of capital expenditure budget. The sources of information can be classified as follows:

Sources	External	Internal
Financial non final	* market and economic trends *government regulations *technological advancement	*cash outflows *operating volumes *productivity impact

2.1.8 Budgeting:-

A tool of profit planning and control:

A budget is a detailed plan outlining the acquisition and use of financial and other recourses over some given time period. It represents a plan for the future expressed in formal quantitative terms. The act of preparing a budget is called budgeting. The use of budgets to control a firm's activities is known as budgetary control.

The master budget is summary of all phases of a company's plans and goals for the future. It sets specific targets for sales, production, distribution and financing activities and it generally includes in a projected statement of cash position. In short, it represents a comprehensive expression of management's plans for the future and how these plans are to be accomplished.

Nearly everyone prepares and uses budgets some short, even though many people who do not so may not recognize what they are doing as budgeting. For example, most people makes estimates of the income to be realized over some future time period and plan expenditures for food clothing housing and so and accordingly. As a result of this planning, spending will usually be restricted by limiting it to some predetermined allowable amount. In this type of action use estimates of income and expenditure to predict what their financial condition will be at some specific future time. The budgets involved here may exist only in the mind of the individual, but they are budgets nonetheless in that they involve plans of how resources will be acquired and used over some specific time period.

The budgets of a business firm serve much the same functions as the budgets prepared informally by individuals. Business budgets tend to be more detailed and to involve more work in preparation. But they are similar to the budgets prepared by individuals in most respect. Like personal budgets, they assist in predicting operating results and financial condition in future periods.

2.1.8.1 Types of Budget

All enterprises make plans-some in a systematic and formal way, while others in an informal manner. However they differ in their budgeting practices. Generally, the large and medium firms have a comprehensive system of budgeting-prepare budgets. For all of their important operations, but the small firms and some large and medium firms do not have a comprehensive system of budgeting they prepare budgets for a few of their operations. We have emphasized previously that a comprehensive budgeting involves the preparation of a master budget with the complete package of the component budgets.

The components of master budgets are as follows: (Anthony & Reece, 1977:487-502)

a. Operating budgets:

Operating budgets relate to the planning of the activities or operations of the enterprise such as production sales and purchase. Operating budgets is composed of two parts a program or activity, budget and a responsibility budget. These represent two different ways of looking at the operations of the enterprises but arriving at the same result.

b. Activity budget:

A program or activity budget specifies operations or functions to be performed during the next year one logical way to prepare this kind of budget is plan for each product the expected revenues and their associated costs. The program budget focuses on activities rather than persons; it exhibits the expected future in and impersonal manner. It is helpful in ensuring balance among various operations or functions of an enterprise.

c. Responsibility budget:

A responsibility budget specifies plans in terms of individual responsibilities. The focus is on individuals. The basic purpose of this kind of budget is to achieve control by comparing the actual performance of a responsible individual with the expected performance. Of course an individual will be responsible only for the controllable activities. An individual should be involved to prepare those parts of the operating budget, which relate to his area of responsibility.

d. Periodic and continuous budget:

There are two ways in which the operating budget may be prepared-

1. Periodic budgeting:-

It involves the preparation of budget for the fourth coming year without providing for a comprehensive revision as the budget period passes. The budget period is generally divided into months that is, the annual budget consist of the monthly estimates.

2. Continuous budget:-

It provides a system of revising the budget for the changing conditions continuously. The method involves the preparations tentative annual budget with the provision that the month or quarter just ended is dropped and a month or quarter in the future is added.

e. financial budget:

Financial budgets are concerned with the financial implications of the operating budgets. The expected cash inflows and out flows, financial positions and the operating results. The important components of financial budgets are cash budget perform balance sheet and income statement to changes in financial positions.

f. cash budget:

Cash budget is the most important component of financial budgets. A good management would keep cash balance at optimum level, too little cash endangers the liquidity of the company and too much cash tends to impair profitability. The major objectives of the cash budget is plan cash in such a way that the company always maintains sufficient cash balance to meet its needs and use of idle cash in the most profitable manner.

g. Performa financial statements:

Performa financial statements- balance sheet and income statements shows the end result of the budget operations. Performa financial statements give as to the future assets, liabilities, and revenue and expenses items. The analysis of the present and past financial statements indicates the direction of change in the financial positions and performance of the enterprise. The future can be planned to follow the past directions or to change it. The preparation of the cash budget and Performa statements compels management to look ahead and balance its policies and activities.

h. capital budgets:

Capital budget involves the planning to acquire worthwhile projects together with the timing of the estimated cost and cash flows of each project. Such project require large sum of funds and have long term inspections of the firm capital budgets are difficult to prepare because estimates of the cash flows over a long period have to be made which involve a great degree of uncertainty.

The capital budgets are generally prepared separately from the operating a investment projects. In the capital budget the profitability of each project has to be carefully evaluated.

2.1.8.2 Advantages of Budgeting

Budgeting is a management tool, it is way of managing many benefits are derived from budgeting, although it is a means not and end in itself budgeting is a feed forward process. It makes and evaluation of the variables likely to affect future operations of the enterprise. It predicts future with reasonable precision and removes uncertainty to a great extend. The following are some of the more significant advantages of budgeting. (Pandey, 1999:255)

1. Forced planning:-

Budgeting compels management to plan for future. The budgeting process forces management to look ahead and become more effective and efficient in administering the business operation.

2. Coordinated operations:-

Budgeting helps to coordinate, integrate and balance the efforts a various departments in the light of overall objectives of the enterprise. This result is goal congruency and harmony among the departments.

3. Performance evaluation and control:

Budgeting facilitates control by providing definite expectations in the planning phase that can be used as a frame of reference for budgeting the subsequent performance. Undoubtedly, budget performance is a more relevant standard for comparison that past performance, since past performance is best on historical factors which are constantly changing.

4. Effective communication:

Budgeting improves the quality of communication. The enterprise objective, budget goals, plans, authority and responsibility and procedures to implement plans are clearly retain and communicated through budgets to all individuals in the enterprise. This result in better understanding and harmonious relations among mangers and subordinates.

5. Optimum utilization of resources :

Budgeting helps to optimize the use of the firms resources- capital and human, it aids in directing the total efforts of the firm into the more profitable channels.

6. Productivity improvement:

Budgeting increases the moral and thus the productivity of the employees by seeking their meaningful participation in the formulation of planners and policies bringing a harmony between individual's goals and the enterprises objectives and by providing incentives to perform more effectively.

7. Profit mindedness:

Budgeting develops and atmosphere of profit mindedness and cost consciousness.

8. Management by expectations:

Budgeting permits to focus the management attention on significant matter through budgeting reports.

9. Efficiency:

Budgeting measures efficiency, permits management self evaluation and indicates the progress in attain the enterprise objectives.

2.1.8.3 Problems and Dangers of Budgeting

Budgeting is a systematic approach to the solution of problems. But it is not full proof; it suffers from certain problems and limitations. The major problems in developing a budgeting system are :(Pandey, 1999: 256-257)

- Seeking the support and involvement of all levels of management.
- Developing meaningful forecast and plans specially the sales plan.
- Educating all individuals to be involved in the budgeting process and gaining their full participations.
- Maintaining effective follow-up procedures and adapting the budgeting system whenever the circumstances change.
- Applying the budgeting system in a flexible manner.

Management must consider the following limitations in using the budgeting system as a device to solve managerial problems.

i. Management judgment:

Budgeting is not exact science its success hinges upon the precision of statement. Managerial judgment can suffer from subjectivism and personnel biases. The adequacy of budgeting thus depends upon the adequacy of managerial judgment.

ii. Continuous adaptation:

The installation of perfect system of budgeting is not possible in a short period. Business condition change rapidly, therefore budgeting program should be continuously adapted. Budgeting has to be continuous exercise it is a dynamic process. Management should not lose patience, they should go on trying various techniques and producers in developing and using the budgeting system. Ultimately they will achieve the success and reap the benefits of budgeting.

iii. Implementation:

A skillfully prepared budgetary program will not itself improve the management of an enterprise unless it is properly implemented. For the success of the budgetary program it is essential that it is understood by all and that the manager's sub-ordinates put concerted effort for accomplishing the budget goals. All people, otherwise budgeting will not be effective.

iv. Management complicity:

Budgeting is a management tool – a way of managing not the management. The presence of a budgetary system should not make management complaiscent. To get the best results of managing, management should use budgeting with intelligence and foresight, along with other managerial techniques. Budgeting assists management, it cannot replace management.

v. unnecessary details:

Budgeting will be in effective and expensive if it is unnecessarily detailed and complicated. A budget should be precise in format and simple to understand, it should be flexible, not rigid in application.

vi. Goal conflict:

The purpose of budgeting will be defeated if carelessly set budget goals conflict with enterprise objectives. This confuses means with the end results. Budget goals are the definite target to achieve the overall enterprise objectives. They must be in harmony with enterprise aims.

vii. Evaluation deficiencies:

Budgeting will hide inefficiencies instead of revealing them, if a proper evaluation system is lacking. There should be continuous evaluation of the actual performance standards also should be re-examined regularly.

viii. Unrealistic targets:

Budgeting will lower morale and productivity if unrealistic targets are set and if it is used as a pressure tactic. To some extent budgeting may be used as a pressure device but it's extent must be carefully determined.

2.1.8.4 The Multiple Functions of Budgeting:

Budgeting serve a number of useful purposes. They include (Basnet, 2004:62)

1. Planning :

The major planning decisions will already have been made as a part of the long term planning process. However the annual budgeting process leads to the refinement of those plans. Since managers must produce detailed plans for the implementations of the long-range plan. Without the annual budgeting process the pressure of the day-to-day operating problems may tempt managers not to plan future operations. The budgeting process ensures that managers do plan for future operations and that they consider how conditions in the next year might change and what steps they should take now to respond to these changed conditions. This process encourages managers to anticipate problems before they arise and badly decision that are made on the arise spur of the moment based on expediency rather than reasoned judgment will be minimized.

2. Coordination :

The budget serves as vehicle through which the action of the different parts of an organization can be brought together and reconciled into a common plan. Without any guidance, managers may each make their own decisions, believing that they are working in the best interests of the organization. For example, the purchasing manager may prefer to place large orders so as to obtain discounts, the production manager will be concerned with avoiding high stock levels and the accountant will be concerned with the impact of the decision on the cash resources of the business. It is the aim of budgeting to reconcile these differences for the goods of the organization as a whole, rather than for the benefit of any individual area. Budgeting therefore compels managers to examine the relationship between their own operations and those of other departments and in the process, to identify and resolve contents.

3. Communication:

If an organization is to function effectively there must be definite lines of communication so that all the parts will be kept fully informed of the plans and the policies to which the organization is expected to conform. Everyone in the organization should have a clear understanding of the parts they are expected to play in achieving the annual budget. This process will ensure that the appropriate individuals are made accountable for implementing the budget. Through the budget, top management communicated its expectations to lower level management, so that all members of the organization may understand these expectations and can co-ordinate their activities to attain them. It is not

just the budget itself that facilitates communication-much vital information is communicated in the actual act of preparing it.

4. Motivation :

The budget can be a useful device for influencing managerial behavior and motivating managers to perform in line with the organization objectives. A budget provides a standard those uncertain circumstances, the managers may be motivated to strive to achieve. However budgets can also encourage inefficiency and conflict between managers. If individuals have actively participated in preparing the budget and it is used as a tool to assist managers in managing their departments, it can act as a strong motivation device by providing a challenge. Alternatively, if the budget is dedicated from above, and imposes a threat rather than a challenge, it may be resisted and do more harm than good.

5. Control :

A budget assists managers in managing and controlling the activities for which they are responsible. By comparing the actual results with the budgeted amounts for different categories of expenses, managers can ascertain which cost do not confirm to the original plan and thus requires their attention. This process enables management to operate a system of management by exception which means that a manager's attention and effort can be concentrated on significant deviations from the expected results. By investigating the reasons from the deviations managers may be able identify inefficiencies such as purchase the inferior quality materials. When the reasons for the insufficiencies have been found appropriate control action should be taken to remedy the situation.

6. Performance evaluation:

A manager's performance is often evaluated by measuring his success in meeting the budget. In some companies bonuses are awarded on the basis of an employees' ability to achieve the targets specified in the periodic budgets or promotion may be partly dependent upon a manager's budgeted record. In addition, the managers may wish to evaluate his own performance. The budget thus provides a useful means of informing managers of how well they are performing in meeting targets that they have previously helped to set.

2.1.8.5 Administration of Budgeting Process:

It is important that suitable administration procedures be introduced to ensure that the budget process works effectively. In practice, the procedures should be tailor – made to requirement of the organization, but as a general rule a firm should ensure the procedures are established for approving the budgets and that the appropriate staff support is available for assisting managers in preparing their budgets. (Basnet, 2004:66)

1. The budget committee:

The budget committee should consist of high-level executives who represent the major segments of the business. Its major task is to ensure that budgets are realistically established and that they are coordinated satisfactorily. The normal procedure is for the functional heads to present their budget to the committee for approval. If the budget does not reflect the reasonable level of performance, it will not be approved and the budget and re-submit it for approval. It is important that the person whose performance is being measured should agree that the revised budget can be achieved, otherwise if it is considered to be impossible to achieve, it will not act as a motivational device. The budget committee should appoint a budget officer who will normally be the accountant, so that the budget committee and the budget can see the impact of an individual budget on the organization as a whole.

2. Accounting staff:

The accounting staff will normally assist managers in the preparation of their budgets they will circulate and advise on the instructions about budget preparation, provide past information that may be useful for preparing the present budget and ensure that managers submit their budgets in time. The accounting staffs do not determine the contents of the various budgets but they do provide a valuable advisory and clerical service for the line managers.

3. Budget manual:

The budget manual should be prepared by the accountant. It will describe the objectives and procedures involved in the budgeting process and will provide a useful reference source for managers responsible for budget preparation. In addition the manual may include a time table specifying the order in which the budgets should be prepared and the dates when they should be presented to the budget committee. The manual should be circulated to all individuals who are responsible for preparing budgets.

2.1.8.6 Stages in Budgeting Process:

The important stages of budgeting process are as follows :(Basnet, 2004:67)

1. Communicating details of the budget policy:

Many decisions affecting the budget year will have been taken previously as a part of the long – term planning process. The long range planning is starting point for the preparation of the annual budget. Thus top management must communicate the policy effects of the long term plan to those responsible for preparing the current year’s budgets. Also any expected changes in industry demand and output should be communicated by the top management to the managers responsible for the budget preparation. It is essential that all managers be made aware of the policy of top management for implementing the long term plan in the current year’s budget so that common guidelines can be established.

2. Determining the factor that restrict performance:

In every organization there is some factor that restricts performance for a given period. In the majority of organization this factor is sales demand. However it is possible for production capacity to restrict performance. When sales demand is in excess of available capacity prior to the preparation of the budgets, it is necessary for top management to determine the factor that restricts performance, since this factors determines the point at which the annual budgeting process should begin.

3. Preparation of the sales budget:

The volume of sales and the sales mix determine the level of a company operation, when sales demand is the factor that restricts output. For this reason, the sales budget is the most important plan in the annual budgeting process. This budget is also the most difficult plan to produce, because total sales revenue depends on the actions of the customers. In addition sales demand may be influenced by the state of the economy or the actions of the competitors.

4. Initial preparation of budgets:

The managers who are responsible for meeting the budgeted performance should prepare budget for those areas for which they are responsible. The preparation of budget should be a bottom –up process. This means that the budget should originate at the lowest levels of management and be refined and coordinated at higher level.

5. Negotiations of budgets:

To implement a participative approach in budgeting, the budget should be originated at the lowest level management. The managers at this level should submit their budget to their superiors for approval. The superior should then incorporate this budget with other budgets for which he is responsible and then submit this budget for approval to his superior. The manager who is superior then becomes the budget at the next higher level.

6. Co-ordination and review of budget:

As the individual budgets move up the organizational hierarchy in the negotiation process, they must be examined in relation to each other. This examination may indicate that some budgets are out of balance with other budgets and need modifying so that they will be compatible with other conditions, constraints and plans that are beyond a manager's knowledge or control. Any changes in the budgets should be made by responsible managers and this may require that the budgets be recycled from the bottom to top for a second or even a third time until all budgets are co-ordinate and acceptable to all the parties involved.

7. Final acceptance of the budgets:

When all the budgets are in harmony with each other they are summarized into a master budget consisting of a budgeted profit and loss account, a balance-sheet and a cash flow statement. After the master budget has been approved, the budgets are then passes down through the organization to the appropriate responsibility centers. The approval of the master budget is the authority for the manager of each responsibility center to carry out the plans contained in each budget.

8. Budget review:

The budget process should not stop when the budgets have been agreed periodically the actual results should be compared with the budgeted results. These comparisons should be made on a monthly basis and a report sent to appropriate budget in the first week of the following month so that the it has the maximum motivational impact. This will enable management to identifying the items that are not proceeding according to plan and to investigate the reasons for the differences. If these differences are within the control of management, corrective action can be taken to avoid similar inefficiencies occurring again in the future. However the differences may be due to the fact that the budget was unrealistic to begin with or that actual conditions during the budget year with different from those anticipated, the budget for the remainder of the year would than be involved.

2.1.9 Completion of Profit Plan

The process of profit planning ends with the planned income statement and planned balance sheet. These budgets of statements integrate and summarize the detailed plans developed by management. In order to prepare these statements, other some additional budgets should be planned. The following budgets should be prepared in course of completing the profit plan. (Welsch, Hilton & Gordon, 1992:87)

a. Planned cost of goods manufactured

Production budget determines only the quantities of goods manufactured in each time where as planned cost of goods manufactured determines the monetary value of quantity of goods produced. It includes direct materials, direct labor, manufacturing overheads incurred for production. It is calculated as follows:

Opening stock of raw materials (Rs.)	XXX
Add: purchase of raw materials	<u>XXX</u>
Total stock	XXX
Less: closing stock of raw materials	(XXX)
Add: direct raw material used	XXX
Add: direct labor cost	XXX
Variable overhead	<u>XXX</u>
Planned cost of goods manufactured	XXX

b. Planned cost of goods sold:

The cost of goods sold is to be prepared after completion of the cost of goods manufacturer budget. This budget determines the manufacturing, cost of sale quantity. It includes direct material, direct labor and manufacturing overhead cost of sales by time and product. It is calculated as follows:

Opening stock of raw materials	XXX
Add: purchase of raw materials	<u>XXX</u>
Total stock	XXX
Less: closing stock of raw materials	(XXX)
Add: Direct raw material used	XXX

Add: direct labor cost	XXX
Add: variable overhead	XXX
Planned cost of goods manufactured	XXX
Add: opening stock of work in progress	XXX
Less: closing stock of work in progress	<u>(XXX)</u>
Planned cost of goods manufactured	XXX
Add: opening stock of finished goods	XXX
Total finished goods available	XXX
Less: closing stock of finished goods	<u>XXX</u>
Planned cost of goods sold	<u>XXX</u>

c. Planned income statement

Planned income statement is concerned with determining the total income of the planned period. It is to be prepared under accrual basis rather than cash basis on the basis of other preceding budgets. It is calculated as under

Sales revenue	XXX
Less: cost of goods sold	<u>(XXX)</u>
Gross income	XXX
Add: non operating incomes	<u>XXX</u>
	XXX
Less: operating expenses	(XXX)
Add: non operating expenses	XXX
Net income before tax	XXX
Less: tax	<u>(XXX)</u>
Net income after tax	<u>XXX</u>

d. Planned balance sheet:

It is concerned with the forecasting total assets and properties and capital and liabilities of the company by time period. The planned balance sheet can be prepared as follows:

Budgeted balance sheet:

Capital and liabilities	Amount	Assets	Amount
-------------------------	--------	--------	--------

Share and capital	XXX	Fixed assets	XXX
Profit and loss A/C	XXX	Current assets	XXX
Debenture	XXX	. Cash on hand	XXX
		. inventory	XXX
Long term loan	XXX	. Account payable	XXX
Bank loan	XXX		
Account payable	XXX	Preliminary expenses	XXX
Provision for tax	XXX	Discount on shares	XXX
Outstanding expenses	XXX		

2.1.10 Control process of profit plan:

Any business organization's management has to devote more time and efforts to develop profit plan for the attainment of desired profit. Managerial activities include evaluation of effectiveness and efficiency of plans and performance. Control is a procedure of measuring the actual task with planned Evaluation of performance and reporting it to concerned places are necessary aspects of comprehensive planning and controlling program.

For the control process of profit plan two types measures are available (According to Welsch)

i. Performance report:

For the control implication report offer management essential insight into all facts of professional efficiencies performance reports pose critical behavioral problems because inefficiencies as well as efficiencies of individuals are pinpointed and reported. The main objective of performance report is the communication of performance measurements, actual results and related variances.

Performance reports should be prepared by considering the following criteria as stated by Welch, Hilton and Gordon.

1. Designed to implement the management by exception principle.
2. Repetitive and related to short time periods.
3. Tailored to the organizational structure and focus of controllability.

4. Simple understandable and report only essential information.
5. Accurate and designed to pinpoint significant distinctions.
6. Prepared and presented promptly.
7. Constructive in time.
8. Adapted to the requirements of the primary users.

After the preparation of performance report, the actual results are compared with objectives and standards and the differences are analyzed by the management. A performance report shows variances are pressed in amounts as well as percentage of the planned or budgeted amount, statistical control unit should also be developed to determine the significance of variances. being reported and cumulative variances to date such reports are usually prepared for each responsibility center.

ii. Analysis of budget variances:

The difference between budgets and actual results is known as variance.

A performance report shows the variances which should analyze the causes of differences by the management variance analysis is made to determine the reasons for a reported variance whether they are favorable or not. If variance is significant, a careful management study should be made to determine the underlying causes. There are many ways to find out variance:-

1. Analysis of the work situation including the flow of work, co-ordination of activities, effectiveness of supervision and other prevailing circumstances.
2. Direct observations.
3. Conference with responsibilities center managers and supervisors and other employees in the particular responsibilities center involved.
4. On the spot investigation by line manages.
5. Variance analysis.
6. Special studies.
7. Internal audits.
8. Investigation by staff group.

Variance analysis is a mathematical tool for the two sets of data to find out the understanding causes of variance. It is very useful tool for the control process of profit planning.

2.1.11 Importance of profit planning and control

Profit planning and control suggest a sophisticated approach to decision-making, continuous communication and integration of actual historical data, projections and managerial judgments. It can be prepared at different ways such as product wise, department wise, time wise, capacity wise etc. so its flexible application is another important function of the profit planning. It can be applied in large enterprises and small enterprises. (Adhikari, 2006: 17)

The following arguments are in favor of profit planning and control:

1. It requires adequate and sound organization structure; that is there must be a definite assignment of responsibility for each functions of the enterprise.
2. It compels all member of management, from top to bottom, to participate in establishments of goals and plans.
3. It compels departmental managers to make plan in harmony with the plans of the other departments and of entire enterprise.
4. It requires that management put down in figures what is necessary for satisfactory performance.
5. It requires adequate and appropriate historical accounting data.
6. It compels management the habit of timely, careful and adequate consideration of the most economical use of labor, material and capital.
7. It instills at all levels of management the habit of timely, careful and adequate consideration of relevant factors before reaching important decisions.
8. It reduces cost by increasing the span of control because fewer supervisors are needed.
9. It frees executive from day to day-internal problems through predetermined policies and clear-cut of the authority relationship. It thereby provides more executive time for planning and creative thinking.
10. It tends to remove the cloud of uncertainty that exist in many organizations, especially among lower level of managements, relative to basic policies and enterprise objectives.
11. It pinpoints efficiency and inefficiency. It promotes understanding among members of management of their co-worker's problems.
12. It forces a periodic self-analysis of the company.

13. It aids in obtaining bank credit; banks commonly require a projection of future operation and cash flows to support large loans.
14. It checks process and lack of process toward then objectives of the enterprise.
15. It rewards high performance and seeks to correct unfavorable performance.
16. It forces recognition and corrective action.

2.2 REVIEW OF PREVIOUS RELATED STUDIES

There are very few research papers concerning profit planning has been conducted. Whatever the research in the area of profit planning have been made in are also not in depth and are in detail. Very few dissertations have been submitted in the topics of profit planning in Nepal.

Mr. Khadag Bahadur Tadi (2006) has conducted a research about “Relationship between Budgeting and financial reporting. A case study of national trading limited. he has attempt the point out some features and problem of budgeting.

The basic objectives of his research work were to:

- a. Analyze the budget of national trading.
- b. Examine the application of different functional budget of as tool of budgeting in NTL.
- c. Provide suggestion for improve the budgeting and budgeting problems.

Mr. Tadi conclude his research with some findings .conclusion and recommendation .the major findings of research were:

-) No any special plan and objective for the comprehensive budgeting in Nepalese trading concern.
-) Lack of coordination between the departments.
-) Frequently change in management.
-) Under utilization of available capacity.

His recommendations are:

-) Government interference should be minimized .so that the management could set the strategies and policies to fulfill the objectives in free way and should take responsibility.
-) In depth analysis of industry strength and weakness is necessary. Industry should try to overcome its weakness by using strength.
-) Need of long strategic plan.
-) Budget should be based of realistic ground.
-) A systematic approach should be made towards comprehensive Budget.

Mr. Rohan Basnet (2005) ,has worked out an research on “Management Accounting practices in Nepalese manufacturing Enterprises” his study was mainly focused on the accounting system of Nepalese manufacturing Enterprises .He conclude:

-) While examine the tools practices by Nepalese manufacturing company it was found that it capital budgeting, cash flow, ratio analysis and annual budgeting were most practiced management accounting tools. Whereas Zero based budgeting, activity based budgeting, responsibility were less used tools.
-) Lack of information extra cost burden and cognizance about management accounting tools are the main factors causing problem in the application of such management accounting tools.
-) Nepalese manufacturing sector is infant stage in practicing management accounting tools. No one company has separate accounting department.
-) Budget and plans is formulated by all companies according to their past events.
-) Lack of knowledge, lack of skilled man power and extra cost burden are the main reason behind not practicing new management accounting tool.

Based on the conclusion above stead Mr. Basnet has recommended some suggestion as:

-) Tanning institute should be developed to produce such man power.

-) Academicians should put offer to bring the new technique and tools in light.
-) Information about the new and advance technique should be conveyed through different media.
-) Campaign should be carried out to increase awareness about such tools and technique.
-) Seminar and workshop should be conducted for companies' manager so that they could be acquainted with new tools and its wage and benefits.

Ms. Sunita Shrestha (2007) has worked out “Budgeting and profit planning in to public Enterprises”, A case study of Royal Drug Limited. She focused on her study mainly on budgeting and profit of the company. She also follows conclusion and recommendation on her study:

-) The research could not find the co-ordination among in RLD. So RLD must be creating co-ordination among all the employees.
-) Positive profit depends on capacity utilization .So; RLD must try to utilize maximum capacity.
-) To make employees sincere in their work, reward and punishment system must be maintained for efficient performance.
-) There is far distance between actual sales and target sales due to weak promotion policies so RLD should take concern to its betterment to cover the gap.

Some recommendations are as follows:

-) Information technology (computer) should be used for fast and better performance for recording and reporting which reduce unnecessary man power.
-) RLD should develop own website so that public can easily know about this organization.

Mr. Arpan Neupane (2008) has submitted a dissertation on the topic “**Profit Planning in Manufacturing Enterprises in Nepal**”. A comparative study in Dairy Development Corporation (DDC) and Sita Ram Dairy industry (SRD). The main objective of the study

is to highlight the applicability of and effectiveness of profit planning in manufacturing enterprises. Regarding this broad objective, he pointed out the following specific objectives.

- a. To analyze of functional budgets on sales and production sector of the concern.
- b. To analyze of various accounting ratios to measure the profitability and efficiency of the concern.
- c. To study of present process to find its usefulness and limitations.
- d. To analysis budget target and its achievement along with reasons of deviation if any.

Some major recommendations are:-

1. The promotion of personal is felt necessary to boost up their moral. Time to time training is essential to develop their performing skills and activities.
2. A systematic approach should be made towards comprehensive profit planning. This can considerable contributes to the increase profitability of DDC and SRD.
 3. Direct labor budget should be developed by responsibility centered by interim time periods and product.

Mr. Bijay Prasad Gupta (2009) has worked out on “Budgeting and Profit planning in to Nepalese trading Enterprise “, A case study of salt trading corporation Limited. He has attempted to point out the following conclusion and recommendation on his study:

-) Sales trend of STCL shows the negative direction for future which can decrease the profitability in future.
-) STCL has not clear cut goals, objectives and policies. STCL has no any effective program to achieve the desire goal and objective to overcome the exciting problem and challenge.
-) STCL has no separate costing department. Costing is done by traditional methods.

) The pricing policy of the computation is also the causes of loss. The corporation has not followed by any pricing method. The pricing has made on adhoc basis.

Some recommendations are as follow:

-) STCL should formulate clear cut objective, goal, policies, long term plan and strategic planning etc.
-) STCL should develop overhead budget in systematic way. All overhead expenses should be classified in separating heading. Selling and distribution cost should be introduced separately so that will be helpful for the management of STCL to control the expenses for company.
-) To improve profit planning system in STCL, trained and qualified man power should be improved. For this staff should be properly trained.

2.3 RESEARCH GAP

There are various researches have mentioned on the topic “Profit planning and control”, it has studied trading company and public enterprises. There is need for some specific study of profitability in terms of Profit planning and control as well as STCL & NTL has been taken as the specific for such study i.e. “Profit Planning and Control System of Nepalese Trading Enterprises; a comparative study of STCL and NTL” is a new topic for the research work. It is expected that the uncovered areas of this research work will be studied. The gapping between old and new research work will be focused and filled up based on the given objectives and the limitation in this research. I hope this research will definitely help the new researchers to study in the corresponding subject.

CHAPTER-III

RESEARCH METHODOLOGY

Research is an ongoing and ever growing activity. It is done not only to solve a problem existing in the work setting but also to add or contribute to the general body of knowledge in a particular area of interest. “Research may be defined as the objective and systematic method of finding solution to a problem i.e. systematic collection, recording, analyzing, interpretation and reporting of information about various facts of phenomenon under study.”Source (ghimire, 2058).the following comparison the research methodology adopted for the study:

3.1 RESEARCH DESIGN

Research design is the plan, structure and strategy of investigation conceived so as to obtain answer to research question and to control variances. The plan is the overall scheme on program of research. It includes an outline of what the investigator will do from writing the hypothesis and their operational implication to the final analysis of data. The structure of the research is more specific. It is the outline, the scheme, and the paradigm of the operation of the variables. “A research design is the arrangement of condition for collection and analysis of data in a proper manner that aims to combine relevance to the research purpose economy in procedure.”(Kothari, 1998:9)

Various functional budgets and other related accounting information and statement of the NTL and STCL are informative materials to analyze and evaluate the profit planning system of both companies. So the research design selected for the study is analytical and descriptive.

3.2 NATURE AND SOURCES OF DATA

The significance of research depends upon nature, availability and accuracy of information. The use of secondary data is much extensive which are collected through the record of STCL and NTL. Primary data are based on structural questionnaires and conversation with the executives and other staffs of STCL and NTL.

Secondary data have been collected from the published and unpublished official records of STCL and NTL's Annual Reports. Similarly, other necessary data have been collected from the publication of Ministry of Finance and other previous thesis of the related areas.

3.3 THE POPULATION AND SAMPLE

There are many trading companies which are actively operating their business in market. It is not possible to study all of them regarding the research topic. Therefore among them two reputed trading companies are taken on a judgmental Sample basis from population for this research study. Those companies are National Trading Limited and Salt Trading Corporation Limited. However, this is a case study, and thus the findings couldn't be extensively generalized to all other trading enterprises.

Partial and full investment of Nepal government to the trading sector are the population and the samples are taken in the judgmental basis which are:

Table No. 3.1

Population and Sample

S.N.	Trading Sectors	Sample	%
1	Nepal Oil Corporation Limited	-	
2	National Trading Limited	1	
3	Nepal Food Corporation	-	
4	National Seeds Company Limited	-	
5	Agricultural Inputs Co. Limited	-	
6	The Timber Corporation of Nepal Ltd.	-	
7	Salt Trading Corporation Limited *	1	
Total	7	2	28.57%

(Source: Annual report of PEs, 2066)

* Minority share of Nepal government to this trading sector.

The samples cover the 28.57% among the population taken for this study.

3.4 DATA GATHERING PROCEDURES

Primary as well as secondary data have been used in this research. Primary data concern with the questionnaire to executives and other staff of STCL and NTL. The primary data analysis is based on the eight questions and their responses given by the officials of the two trading companies. Total eighteen questionnaires forms were distributed among the two companies and only twelve respondents gave responses to these questions.

Secondary data have been collected from the annual reports of STCL and NTL. The study covers the period of 5 years i.e. from the fiscal year 2060/61 to 2064/65. Similarly, other necessary data have been collected from the publication of Ministry of finance.

3.5 TOOLS AND TECHNIQUES OF ANALYSIS

This study is confined to examine profit the profit planning of STCL and NTL Therefore; the data have been collected, managed. analyzed and presented in suitable tables, Formats diagrams and charts .Such presentation have been interpreted and explained wherever necessary .Financial, Mathematical and Statistical tools are used to analyze .The first important tool is a financial tool, which includes ratio analysis, CVP analysis and different functional budget of PPC. The other significant tool is statistical tool, which includes Mean, trend analysis and graphic presentation .The details are as follow:

3.5.1 Financial Tools

3.5.1.1 Ratio Analysis

Financial strength and weakness of a firm as well as historical and present financial position of the undertaking be examined by the systematic use of ratio. The following ratios are tested for the PPC of STCL and NTL:

i. Current Ratio

Current ratio represents the ratio of current assets to current liabilities (CA/CL) Current assets includes all those assets which can be converted in to cash normally within the short period and CL is also payable within short period.

$$\textit{Current Ratio}=\textit{Current Assets/Current liabilities}$$

ii. Quick Ratio

Quick ratio establishes the relationship between quick assets and current liabilities. An asset is liquid if it can be converted in to cash immediately. It is calculated as under;

$$\textit{Quick Ratio}=\textit{Quick Assets/Current liabilities}$$

iii. Total Assets turnover Ratio

This ratio shows the firm's ability in generating sales from all financial resource committed to total assets:

$$\textit{Total assets turnover}=\textit{Total Sales/Total assets}$$

iv. Net profit Margin Ratio

Net profit is obtained when operating expenses, interest and taxes are subtracted from the gross profit .The net profit margin ratio is measured by dividing profit after taxes by sales:

$$\textit{Net Profit Margin}=\textit{Profit after Tax/Sales}$$

v. Return on Equity Ratio

Common Shareholder is entitled to the residue profits. The rate of dividend is not fixed. The Shareholder equity will include paid up capital, share premium and reserve and surplus less accumulated loss .It is calculated as under:

$$\textit{Return on Equity}=\textit{profit after tax/Share holder's equity}$$

vi. Interest Coverage Ratio

The interest coverage ratio indicates the firm's ability to meet interest obligation. This ratio used to test to the firm's debt servicing capacity. It is computed by dividing EBIT by interest charge:

$$\textit{Interest coverage Ratio}=\textit{EBIT/Interest}$$

3.5.1.2 Different Functional Budget

There are different types of budget. They are designed for allocation of resources and co-ordination between functional works of the undertaking as under:

i. Sales Budget

The sales planning is the foundation budget for planning in a business organization. All over planning is based on it. Each and every activity of a business depends upon the sales and sales are the main source of cash. So the sales planning is the beginning point in preparing the other different planning. The sales planning can be prepared for a definite future time period by showing volume and unit of sales.

ii. Purchase Budget

After having prepared the production budget the material usage and purchasing budget can be easily constructed. The material usage depends upon the level of production and the level of opening stock and desired closing stock. The units of materials to be purchased can be determined as follows.

$$\text{Purchase (units)} = \text{budgeted usage} + \text{desired closing stock (material)} - \text{opening stock}$$

iii. Administrative Expenses Budget

All those expenses other than manufacturing overhead and distribution expenses are administrative expenses. They are incurred in the responsibility centers that provide supervision and service to all functions of the enterprises rather than in the performance of any one function. It includes a large portion of fixed cost than variable cost.

3.5.1.3 Cost Volume Profit Analysis:-

The cost volume profit analysis is a device to study the behavior of profit in response to change in volume, cost and price. The breakeven analysis is a popular form of the CVP analysis and it indicates the level of sales at which revenue equals costs. The equilibrium point is called the breakeven point.

The contribution ratio also called P/V ratio, is equal to contribution (contribution per unit) divided by sales. Using contribution or P/V ratio, the breakeven point in rupees can be as follows:

$$\text{Breakeven point (in Rs)} = \text{Fixed costs/PV ratio}$$

The excess of actual or budgeted sales over the break even sales is called the margin of safety. It indicates the extent to which sales may fall before the firm suffers a loss.

i. Variable Cost Volume Ratio (V.V. Ratio):-

This ratio shows the proportion between variable cost and total sales revenue.

$$\text{V.V. Ratio} = \frac{\text{Variable cost}}{\text{Sales}}$$

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

This ratio shows the proportion between contribution margin (sales-variable costs) and sales.

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

3.5.2 Statistical Tools

3.5.2.1 Standard Deviation (σ)

The standard deviation is used to measure the risk. It shows the deviation between actual mean and average mean. The standard deviation is calculated with the following formula:

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{\sum(x-\bar{x})^2}{n}}$$

Where, X=Variables

—

X=Mean

n=Number of Years

3.5.2.2 Coefficient of correlation (r) Analysis

Under this chapter Karl Pearson's coefficient is used to find out the relationship between total investment and net profit.

$$r = \frac{\sum UV}{\sqrt{\sum U^2} \times \sqrt{\sum V^2}}$$

Coefficient of correlation between Actual production and Actual sales

3.5.2.3 Co-efficient of Determination (r^2)

Coefficient of determination is the square of coefficient of correlation. This is very convenient and useful way of interpreting the value of coefficient of correlation between two variables.

Co-efficient of determination (r^2) Measure of the degree of correlation between two variables. One of which happen to be independent and another happen to be dependent variables.

3.5.2.4 Probable Error (PEr)

The reliability of co-efficient of correlation helps in interpreting its value with the help of (PEr). It is possible to determine the reliability of the value of co-efficient

$$(PEr) = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

Where, r^2 = square of correlation of coefficient

n=No of pair of observation

It is the value of r is less than PEr, value of r is not significant, and if the value of r is more than PEr, value of r is significant.

3.5.2.5 Trend Analysis

The measurement used in financial management analysis may be classified into two groups those who measure the relation among the items. Insight set of statement, and those who measure the analysis in these items in successive statement. The first is a static analysis measuring position at a point of time or for a period and the second is a dynamic analysis measuring changes of position. Both types of analysis are necessary for a comprehensive interpretation, since it is an important to know not only the proportion as on a certain date but also the trends of the enterprise.

The trend analysis can be calculated as follows:

Straight line trend of actual sales

1. Trend analysis of Actual sales

2.

Trend analysis of Net profit

3.5.2.6 Graphic Presentation

Presenting the information through the graphs makes very easy to understand. The various variables used in this study have been presented in the different types of graphs and diagrams.

3.6 RESEARCH VARIABLES

Sales, production, inventory, profit and loss, financial ratios, CVP analysis, Leverage, Flexible budget etc. are the main variables of the study.

CHAPTER-IV

DATA PRESENTATION AND ANALYSIS

4.1 INTRODUCTION

A firm should be managed effectively and efficiently. This implies that the firm should be able to achieve its objective by minimizing the use of the resources. Thus managing implies co-ordination and control of the efforts of the firm for achieving the organizational objectives. The process of managing is facilitated when management charts its future course of action in advance and takes decisions in a professional manner, utilizing the individual and group efforts in a co-ordinated and rational manner. One systematic manner for attaining effective management performance is budgeting which is a tool of profit planning. Profit planning is a detailed plan of action during the period of one year or less. It helps a firm's financial manager to regulate flow of funds, which is his primary concern.

A profit planning is a short term financial plan. It is an action plan to guide managers to achieving the objectives of a firm. A profit planning is the comprehensive and co-ordinate plan, expressed in financial terms for the operation and the resources of the enterprise for some specific period in future. It determines the approach by which the goals or objectives are to be accomplished commonly. The approach is described in the form of strategies, policies, programs and procedures for achieving the chosen objectives in the given environment to reach in to the basic targets.

The basic objective of the profit planning in any business endeavors is to increase the possibilities of generating profit. A planning, program must be continually adapted to fit changing circumstances. A comprehensive budget program cannot be started and perfected in a short time. Profit planning techniques must be continually adapted, not only for each particular enterprises but for changing condition within the enterprises.

A profit plan could be divided into three parts: operating budget, financial budget and capital budget. Operating budget provides details about the firm's operation i.e. production, sales or purchase budget. Financial budget includes profit and loss statement, balance sheet, statement of changes in financial position and cash budget. Capital budget provides details of investment projects with the amount of capital expenditure planned by

the firm. The growth of success of every organization depends upon the profit earned by it. Usually profit does not just happen. Profit is the output of well-manage activities. When management performs its activities in an organized manner in lieu of profit it is known as profit planning. Profit planning is a major part of overall planning process of an organization. It is the plan of the firm's expectation and it is used as a basic of measuring the actual performance of managers and their unit. Profit planning is a comprehensive and coordinated plan express in financial terms for the operation and resources of an enterprise for some specific period in the future

4.1.1 Objectives of profit plan for organization

The function of the financial manager may be broadened to include profit planning function. The term profit planning refers to the operating decision in the areas of pricing, costs, volume of output and the firm's selection of product lines. Profit planning is a pre-requisites tool for optimizing investment and financing decision. The cost of structure of the firm (both fixed and variable) has a significant influence on a firm's profitability. Fixed cost remains constant while variable cost changes in direct proportion in volume of output changes. Because of the fixed cost, profit fluctuations at a higher degree than the fluctuations in sales. Profit planning helps to anticipate the relationships between volume, cost and profit and develop action plans to face unexpected surprises.

Without any clear objectives any type of organization cannot be achieve its goals. So management of business organization must be necessary to know the objectives in broad terms. Profit is the lifeblood of organizations, which keeps it alive. In business organization there are multiple objectives of profit planning but in the contest of Nepalese organization they are being operating with annual budget and they have no any long range and short range planning system for the achieving of their stated goals and objectives.

Trading organizations in Nepal have very poor return on their employed capital. In means the financial performance of these organizations is very poor most of the organizations are failure to achieve their financial objectives. The rate of return on their investment in fluctuating trends. In this situation profit planning, a new approach of management can help the enterprises to improve their performance and to achieve their performance and to

achieve their establishment objectives. In Nepalese organizations goals and objectives are written but are not adequate for the development of enterprises. Most of the middle level managers have inadequate knowledge of enterprise situation, goals and objectives. In the poor managerial knowledge organizations cannot formulate the effective planning to achieve the given objectives and goals of organization. Without planning there is no fulfillment of goals and objectives. Without goals and objectives there is no base foundation of planning.

4.2 ANALYSIS OF SECONDARY DATA

4.2.1 Sales Plan or Budget

After the planning premises have been received, the development of sales plan is the next step in the preparation of budget. In practical sence, sales plan is the starting point for the development of the Budget. The sales forecast is the stating points for budgeting because inventory levels .purchase and operating expenses are generally geared to rate of sales activity. Sales plan is the starting point in the preparation of comprehensive budget and control. All the other plan and budget are dependent on the sales budget. The budget is usually presented both in unit and dollar of the sales revenue or sales volume. The preparation of sales plan is the best upon the sales forecast. A variety of methods are used to forecast the sales for the planning period.

The sales plan is the foundation for periodic planning in the firm because particularly all other enterprises planning built on it. The primary sources of cash is sales capital additions needed the amount of expenses to be planned, the man power requirement, the production level and other important operational expects depends opun the volume of sales. Therefore, the sales plan must be realistic.

The sales plans have three distinct parts:

1. The planned volume of sales price per unit for each product.
2. The sales promotional plan and
3. The sales or distribution expense plan.

The sales budget itself is an estimate of three main figures. They are:

1. The income that will be earned from sales.

2. The cost and expenses of making these sales and
3. The sales surplus. The income from sales depends on the quantity and the price of the goods which will be sold.

The plan forecast what the business can reasonable expect to sell to its customers during the budget period. The primary purpose of sales plan is:

- a. To reduce uncertainty about futures revenues
- b. To incorporate management, judgment and decision into the planning process.
- c. To provide necessary information for developing other elements of a comprehensive Budget and
- d. To facilitate managements control of sales activity.

Table No. 4.1
Sales Revenue of Salt Trading Corporation Limited (in lakhs)

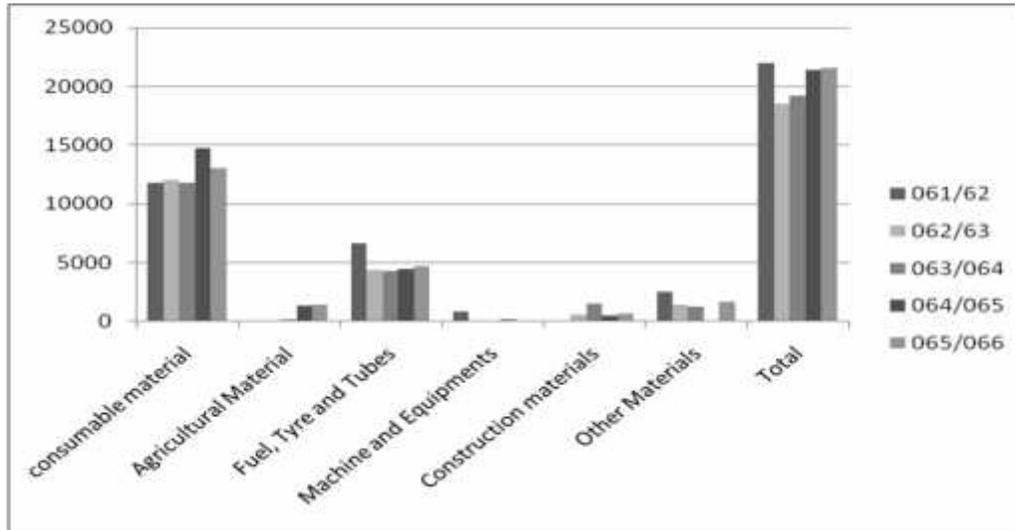
Goods/Year	061/62	062/63	063/064	064/065	065/066
consumable material	11763	12038	11818	14756	13068
Agricultural Material	99.8	1.2	173.5	1382.2	1408.9
Fuel, Tyre and Tubes	6651.8	4409.5	4310.2	4488.8	4668.38
Machine and Equipments	815.3	33.3	26.9	137.7	58.9
Construction materials	69.4	560.6	1547.1	514	685
Other Materials	2540.2	1463.3	1286.6	110.9	1683.9
Total	21939.5	18505.9	19162.3	21389.6	20276

(Source: Annual Report of STCL 061/62 to 065/66)

From the above table it is clear that, the sales revenue of STCL is in fluctuating trend. From the fiscal year 061/62 to 062/63 it is decreasing way but thereafter it has started to increase. Most of the sales amount is covered from the consumable materials; Construction materials cover the 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 following graph:

Figure: 4.1
Sales Revenue of Salt Trading Corporation Limited (in lakhs)



(Source: Annual Report of STCL 061/62 to 065/66)

The above graph shows that total sales of STCL is in decreasing trend from the FY 061/62 to 062/63 and then after it reflects increasing trend.

Time Series Analysis:

To analyze the trend of actual sales least square method can be used to estimate the possible future sales for a given time or year. A straight-line trend by this method will show the relationship between time period and actual sales of the (increase or decrease) with the change in time and such change can be expressed by the component of time factor is considered as independent factor and sales is considered dependent factor upon time. Then straight-line trend of actual sales (y) upon the time (x) is expressed by

$$y = a+bx$$

For the calculation, value of a (constant) and b (variable) can be obtained as under

$$a = \frac{\sum y}{n}$$

$$b = \frac{\sum xy}{\sum x^2}$$

Table No. 4.2

Time Series Analysis of Salt Trading Corporation Ltd

Fitting straight line trend by least square method

(in lakhs)

Year (X)	Actual Sales (Y)	x=X-X'	XY	X²
061/062	21393	-2	-42786	4
062/063	18506	-1	-18506	1
063/064	19162	0	0	0
064/065	21390	1	21390	1
065/066	20276	2	50800	4
Total	Y=105851	x = 0	xy =10898	x² = 10

(Source: Annual Report of STCL 061/62 to 065/66)

(Year 063/64 is taken as base year)

$$a = 105851/5$$

$$= 21170.2$$

$$b = 10898/10$$

$$= 1089.8$$

$y = 21170.2 + 10898.8x$ is the trend line of sales figure which shows the negative sales figure is future.

By using this trend equation we can estimate the actual sales for year 065/66.

For the estimation 066/67 (taking 062/63 base year)

$$y = 21170.2 + 1089.8 \times 3$$

$$= 24439.6$$

If the trend does not change, possible sales for the year 066/67 will be Rs. 24439.6 (in lakhs) i.e. Rs. 2443960000.

Table No. 4.3**Sales Revenue of National Trading Limited (in lakhs)**

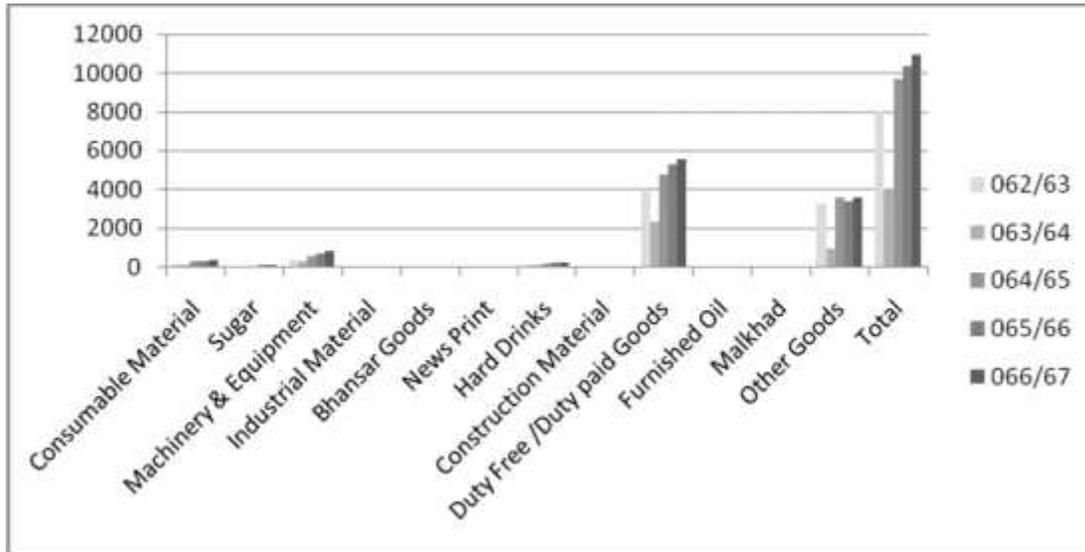
Goods/Year	061/62	062/63	063/64	064/65	065/66
Consumable Material	203.38	146.84	305.14	355.46	385.80
Sugar	43.5	73.8	87.14	98.7	115.6
Machinery & Equipment	418.15	337.71	611.52	740.43	832.03
Industrial Material	0.08	34.23	40.9	67.8	72.9
Bhansar Goods	0.12	0.06	0.13	0.18	0.24
News Print	0.8	0.09	0.1	0.11	0.14
Hard Drinks	125.68	109.6	172.43	240.2	283.9
Construction Material	7.2	6.73	6.23	9.88	10.5
Duty Free /Duty paid Goods	3952.54	2373.33	4802.1	5340	5560
Furnished Oil	67.44	0	80.45	92.5	98.06
Malkhad	2.24	2.97	2.1	3.1	3.97
Other Goods	3270.46	990.12	3577.76	3405.07	3590.99
Total	8091.59	4075.48	9686.00	10353.43	10954.130

(Source: Annual Report of NTL 061/62 to 065/66)

From the above table, total sales revenue of NTL shows fluctuating trend. From the F/Y 061/62 to 062/63 it has started to decrease but thereafter it has started to increase. Most of the sales amount is covered by the duty free goods. Bhansar goods covers low portion of sales amount during the study period. The above figure can also be depicted in the graph as:

Figure: 4.2

Sales Revenue of National Trading Limited (in lakhs)



(Source: Annual Report of NTL 062/63 to 065/66)

Table No. 4.4

Time Series Analysis of National Trading Limited

Fitting the straight line trend by least square method

(in lakhs)

Year (X)	Actual Sales(y)	$x=X-X'$	Xy	x^2
061/62	8091.39	-2	-19550.54	4
062/063	4075.48	-1	-8091.39	1
063/064	9686.08	0	0	0
064/065	10353.43	1	9686.08	1
065/066	13275.00	2	20706.86	4
Total	$y = 45481.38$	$x = 0$	$xy = 16645.17$	$x^2 = 10$

(Source: Annual Report of NTL 060/61 to 064/65)

(Year 063/64 is taken as base year)

$$a = 45481.38/5$$

$$= 9096.27$$

$$b = 16645.17/10$$

$$= 1664.52$$

$y = 9096.27 + 1664.52x$ is the trend line of sales figure which shows the positive sales figure in future.

By using trend equation we can estimate the actual sales for the year 065/66.

For the estimation 065/66 (taking 062/63 as base year)

$$y = 9096.27 + 1664.52 \times 3$$

$$= 14089.83$$

If the trend does not change possible sales for the year 66/067 will be Rs.14089.63 (in lakhs) i.e. Rs.14089000.

4.2.2 Purchase Plan or Budget:

Purchase budget prepared according to purchase amount. First of all trading organization has classified the types of budget needed to trading company. Then it is the second step in the process of profit planning. For the purpose of formulation of profit plan, sales requirement is to be translated in purchase plan. In the case of merchandising company the sales plan compulsorily is to be translated in to purchase plan. In respect of trading corporation, the purchase planned goes in the short run and according to the market situation to seek its consumers.

Table No. 4.5

Purchase Budget of Salt Trading Corporation Limited (in lakhs)

Goods/Year	061/62	062/63	063/64	064/65	065/66
Consumable Material	9,765.00	9,038.00	6,223.20	7,823.20	8,975.50
Agricultural Material	102.00	1.50	183.00	173.00	193.00
Fuel, Tyre and Tubes	4,971.00	2,308.00	2,243.30	4,043.30	4,165.00
Machine and Equipments	819.00	40.60	29.10	39.10	52.00
Construction Materials	54.60	480.40	574.00	582.60	590.00
Other Materials	2,272.40	928.50	830.10	510.80	545.60

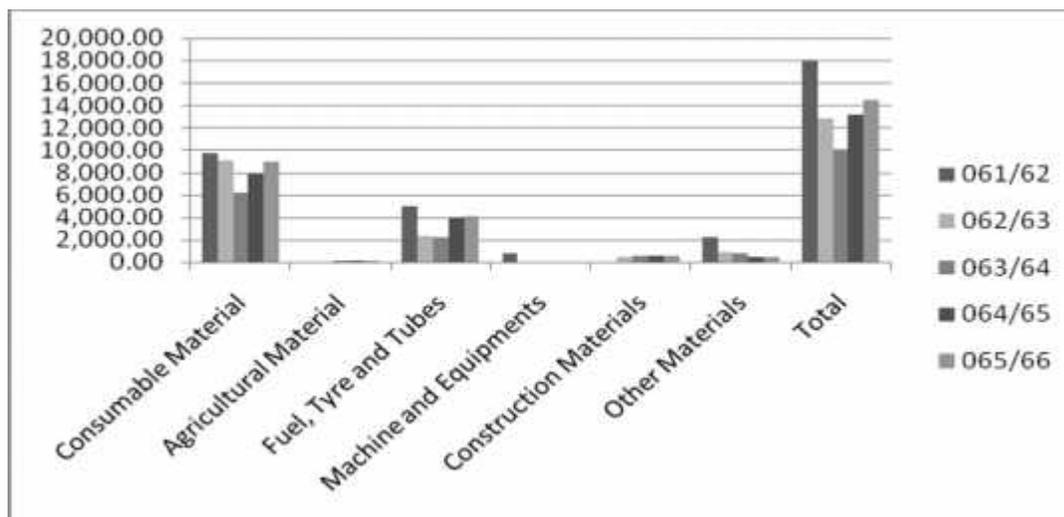
Total	17,984.00	12,797.00	10,082.70	13,172.00	14,521.10
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(Source: Annual Report of STCL 061/62 to 065/66)

The above table shows positive and negative relationship between purchase and sales. From the FY 060/61 to 062/63 both sales and purchase are decreasing way. It shows positive relationship between sales and purchase but thereafter during the FY 063/64 purchase amount has decreased but sales amount has increased it shows negative relationship of sales and purchase and thereafter sales and purchase both are increasing way. It shows positive relation between sales and purchase.

Figure 4.3

Purchase Budget of Salt Trading Corporation Limited (in lakhs)



(Source: Annual Report of STCL 062/63 to 065/66)

Table No. 4.6

Purchase Budget of National Trading Limited (in lakhs)

Goods/Year	061/62	062/63	063/64	064/65	065/66
Consumable Material	215.30	153.80	205.30	357.80	478.37
Sugar	48.20	78.30	46.10	98.30	157.17
Machinery and Equipments	498.20	329.70	408.20	692.67	968.79
Industrial Material	45.70	35.40	40.70	48.50	92.27

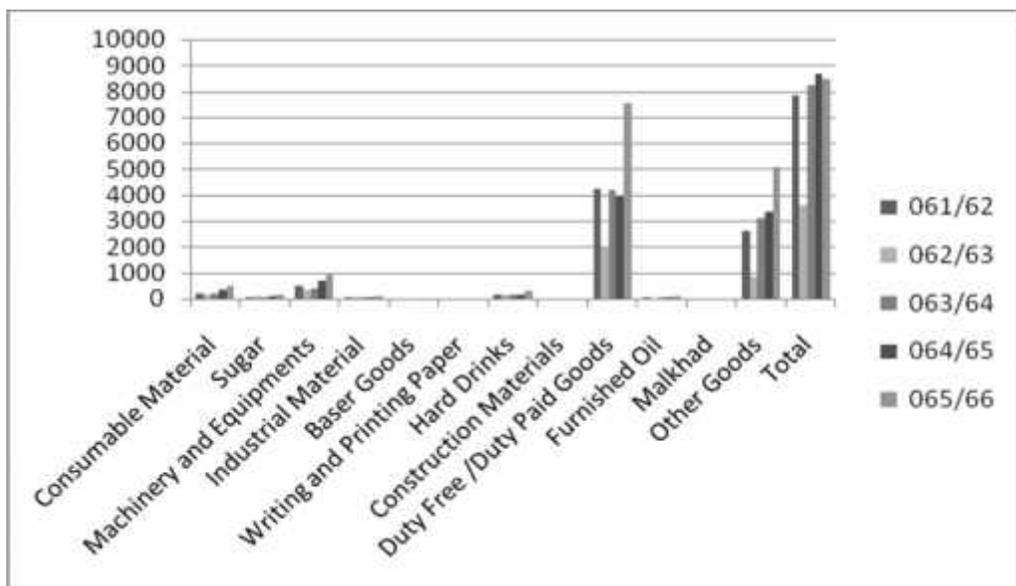
Baser Goods	0.11	0.09	0.11	0.15	0.25
Writing and Printing Paper	0.07	0.08	0.07	0.08	0.18
Hard Drinks	130.60	129.80	125.60	167.00	311.07
Construction Materials	6.90	7.10	6.90	8.34	16.78
Duty Free /Duty Paid Goods	4,213.50	2,004.30	4,208.50	3,938.40	7,525.60
Furnished Oil	69.30	7.20	64.30	37.44	83.98
Malkhad	2.10	2.81	2.10	2.57	5.77
Other Goods	2,612.20	840.22	3,123.00	3,341.00	5,076.88
Total	7,842.18	3,588.80	8,230.88	8,692.25	8461.56

(Source: Annual report of NTL 061/62 to 065/66)

The above table shows positive relationship between purchase and sales. From the FY 061/62 to FY 062/63 the sales and purchase both are decreasing way but thereafter both sales and purchase has started to increase, which shows positive relation. It shows that there is improper planning of inventory level.

Figure 4.4

Purchase Budget of National Trading Limited (in lakhs)



(Source: Annual report of NTL 061/62 to 065/66)

4.2.3 Comparison between Actual Sales and Actual Purchase

All goods are purchased with a motive to sell. There is no matter if the budgeted purchase is not achieved but it is more important that Purchase could meet sales.

Actual Sales and actual purchase are presented below:

Table No. 4.7

Actual Sales and actual purchase of STCL and NTL (In lakhs)

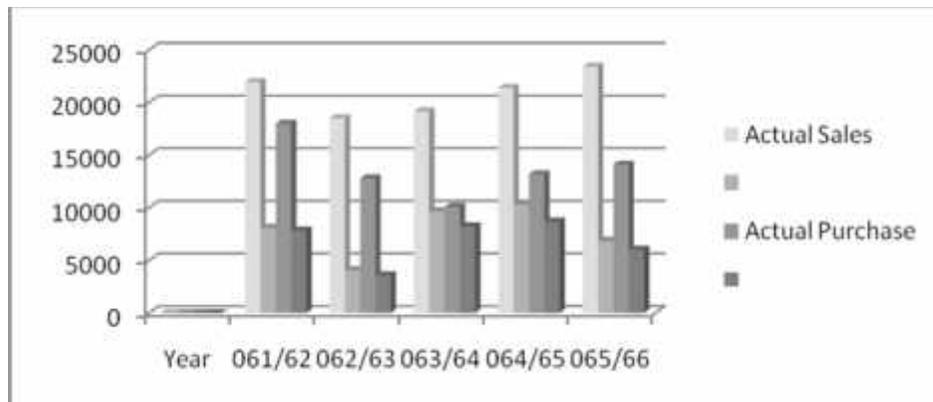
Year	Actual Sales		Actual Purchase	
	STCL	NTL	STCL	NTL
061/62	21939	8091.4	17984	7842.2
062/63	18506	4075.5	12797	3588.8
063/64	19162	9686.1	10083	8230.9
064/65	21390	10353	13172	8692.2
065/66	20276	6859.6	14098.67	6024.9

(Source: Annual report of STCL and NTL, 061/62 to 065/66)

The above table represents the actual purchase and actual sales made by STCL and NTL of overall products in last five years. No any fiscal year purchase has secured achievement in actual sales of STCL and NTL. It means actual purchases are below than actual sales of STCL and NTL over the period of five years.

Figure: 4.5

Actual Sales and Actual Purchases



(Source: Annual report of STCL and NTL, 061/62 to 065/66)

The above figure represents the actual purchase and actual sales of overall products of STCL and NTL.

In order to find out the nature of variability of actual purchase and actual sales, correlation and other statistical tools are used below. This statistical measure shows the degree of relationship between sales and purchase. The detail calculation of these figures (in Annex: 5). whereas the results are summarized below.

Table No. 4.8
Summary of Statistical results

Statistical Tools	Actual Purchase (x)		Actual Sales (y)	
	STCL	NTL	STCL	NTL
Mean	13693.4	7363.22	20881	7813
Standard Deviation	1139	853.27	7607.2	2287.3
Coefficient of Variation (C.V.)	8.31	11.58	41.7	27.2

(Source: Annex: 5)

The above table represents that the actual sales are more variable than actual purchase. Co-efficient of variation of actual sales of STCL and NTL is more than actual purchase of both trading. Efficiency and effectiveness of any management organization can be interpreted by its sales achievement. Thus it can be said that purchase department effort is fruitful. But purchase must be increased as per the increase in sales.

The correlation coefficient is calculated to find out the relation between actual purchase and actual sales. Here Karl Pearson's formula is used to calculate correlation coefficient, which is denoted by r. x is denoted for actual production and y is denoted for actual sales to be independent variable. The calculation is shown in Annex: 5. the value of r depicts the positive correlation between actual sales and actual purchase of both trading. This value indicates that there is a high degree of positive correlation between actual purchase and actual sales.

The significant of r is tested by the help of probable error. From the Annex: 5, we have Per of STCL equals to 0.023. The value of r is definitely significant since r of STCL is greater than per (0.95>0.023). In the other hand Per of NTL equals to 0.012. The value of r definitely significant, since r of NTL is greater than Per of NTL (0.97>0.011).

4.2.4 Administrative Expenses Budget

There are different administrative expenses incurred in the operation of the enterprises. Expenses other than manufacturing and distribution expenses i.e. employee and office expenses is treated as administrative expenses. Employee expenses like salaries, allowance, gratuity, pension, provident fund, training, medical expenses etc. which are related to employees are employee expenses. House rent, stationery, transportation, meeting expenses, insurance, repair and maintenance etc. are also office expenses. The overall administrative expenses budget includes several departmental budgets. It is briefly presented as below.

Table No.4.9

Administrative Overhead cost incurred in STCL and NTL

Year	Administrative Expenses	
	STCL	NTL
061/62	822.90	1,020.30
062/63	883.60	1,152.30
063/64	904.80	1,025.70
064/65	1,143.50	1,217.90
065/066	1,481.00	1,555.40

(Source: Annual report of STCL and NTL, 061/62 to 065/66)

From the above table it is clear that the administrative expenses of STCL are increasing from the FY 060/61 to 064/65. But the administrative expenses of NTL are in fluctuating trend. In the above analysis, administrative expenses of NTL are higher than STCL.

4.2.5 Inventory planning

Usually purchase plan depends on sales of the company but here sales depends on purchase .It is the situation where demand is higher than the supply. STCL can sell all of its production all over the country without any difficulty .Inventory links with sales and production .When sales exceeds purchase level of inventory decrease and when is less than purchase the level of inventory increase .A certain level of inventory is desirable for smooth sales activities .Level of inventory depends upon the various factor like nature of product, season, sales quantity and other factor .NTL and STCL has flexible inventory policy. In fact NTL and STCL have not following any definite inventory policy.

The inventory level of STCL and NTL during the study period is given below (extracted from P/L/A/C)

Table No. 4.10
Beginning and Ending inventory of STCL and NTL (in lakhs)

Year	STCL		NTL	
	Beginning inventory	Ending inventory	Beginning inventory	Ending inventory
061/62	4,706.70	7,898.90	3,544.00	3,805.70
062/63	7,898.90	8,765.80	3,805.70	4,127.90
063/64	8,765.80	7,144.40	4,127.90	3,140.60
064/65	7,144.40	6,116.20	3,140.60	2,893.00
065/66	7,936.32	7,342.13	3,691.02	3,387.13

(Source: Annual report of STCL & NTL 061/62 to 065/66)

Base year (065/066)

The above table shows that during the first two successive years of study period the level of inventory is increasing since the sales trend during first two successive years are also increasing but there after both inventory level and sales trend are in fluctuating trend.

4.2.6 Profit and Loss Account

Profit and loss account presents the summary of revenues, expenses and net income (or net loss) of a firm. It serves as a measure of the firm's ability profit. Revenues are amounts, which the customers pay to the firm for providing them goods and services. The firm uses economic resources in providing goods and services to customers. The cost of the economic resources used to earn revenues during a period of the time are called expenses. Net profit or net income which is an indicator of the firm's profitable operations, is the amount by which revenues earning during a period exceed expenses incurred during that period. If the firm's operations prove to be unprofitable total expenses will exceed total revenues and the difference is referred to as net loss.

Following table shows the profit and loss trend of STCL and NTL during the study period.

Table No. 4.11
Profit and Loss Trend of STCL and NTL (in lakhs)

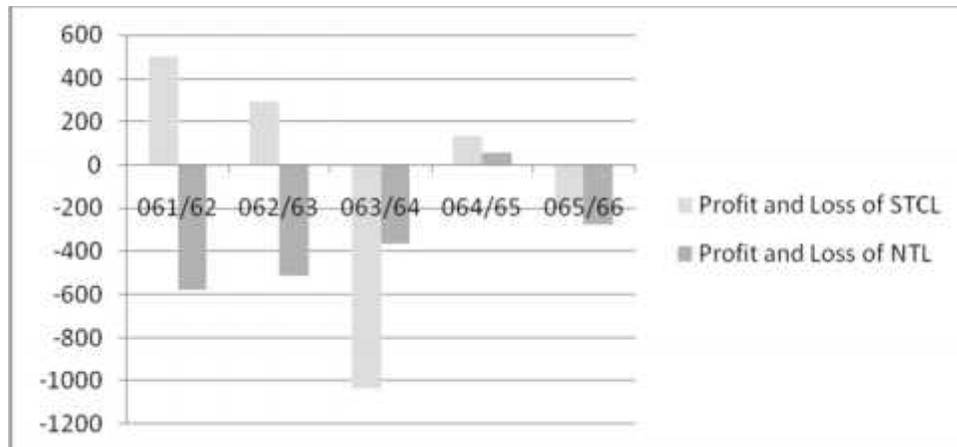
Year	Profit and Loss of STCL	Profit and Loss of NTL
061/62	498.07	-580.5
062/63	290.5	-514.3
063/64	-1036.5	-362.6
064/65	130.3	52.6
065/66	205	274.67

(Source: Annual report of STCL & NTL 061/62 to 065/66)

The above table shows that STCL and NTL has fluctuating trend of profit and loss. During the three successive year of study period profit trend of STCL was fluctuating but, it has beard loss during the fiscal year 064/65 thereafter it has started to generate profit. However, NTL has beard loss from the fiscal year 061/62to 064/65 and thereafter it has started to generate profit to the fiscal year 065/66. It can also be show, in the following bar diagram also:

Figure: 4.6

Profit and Loss Trend of STCL and NTL (in lakhs)



The above diagram shows that during three successive years STCL generated profit then after in the F.Y 064/065 STCL it beared loss. Similarly from the F.Y 061/062 to 064/065 NTL suffered from loss, thereafter it started to generate profit in F.Y 065/066

Table No. 4.12

Net profit of STCL and NTL

Fitting Straight Line by Least Square Method

(in lakhs)

Year (X)	Net Profit of STCL (y)	Net Profit of NTL (y1)	x = X - X'	(x) ²	Xy	xy1
061/62	498.07	-580.5	-2	4	-966	1161
062/63	290.5	-514.3	-1	1	-290.5	514.3
063/64	-1036.6	-362.6	0	0	0	0
064/65	130.3	52.6	1	1	130.3	52.6
065/66	205	274.67	2	4	410	549.34
Total	y = 87.37	y1 = -1130.13	x = 0	x ² = 10	xy = -716.2	xy1 = 2277.24

(Year 063/64 is taken as base year)

For STCL

$$a = y/n = 87.37/5 = 17.48$$

$$b = xy/x^2 = -716.2/10 = -71.62$$

We have the least square trend is $y = a + bx$

$$y = 17.48 - 71.62x$$

Since the equation is negative, this shows the negative trend in future.

For NTL

$$a = -1130.12/5 = -226.25$$

$$b = 2277.12/10 = 227.28$$

We have the least square trend is $y1 = a + bx$

$$y1 = -226.25 + 227.28x$$

Since the equation is negative this shows the negative trend in future.

4.2.7 Performance Evaluation

Performance evaluation covers entire operational areas of the firm. Management performance should be evaluated from the perspective of productivity, profitability, activity, stability and possibility. Management itself can use the parameters to improve the organization's performance in future. Because, truly how know of the strengths and weaknesses for exploiting maximum benefits and to repair the weakness to meet the challenges. Public corporations in Nepal have not any specific, adequate and clear-cut approach to evaluate performance efficiently. It has been observed that STCL and NTL are not sensitive and not serious regarding its performance evaluation. Securities Board,

Nepal has measured the performance evaluation of STCL and NTL on its statistical year book.

This research report use Financial Ratios for the performance evaluation.

Ratio analysis is a tool of scanning the financial statement of the firm. Through this, one comes to know that in which of the operation the organization is strong and which areas it is weak. Ratios are relative figure reflecting the relationship between related variables.

Current Ratio

The current ratio is calculated by dividing current assets by current liabilities.

$$\text{Current Ratio} = \text{Current assets} / \text{Current liabilities}$$

Current assets include cash and those assets, which can be converted into cash within a year such as marketable securities, debtors, prepaid expenses and inventories. All obligations maturing within a year are included in current liabilities such as creditors, bills payable, accrued income etc. It measures the firm's short term solvency.

The current assets, liabilities and current ratio of STCL and NTL are presented below:

Table No. 4.13
Current Ratios of STCL and NTL

Year	Current Assets		Current Liabilities		Current Ratio	
	STCL	NTL	STCL	NTL	STCL	NTL
061/62	15439.3	5246.6	11901	4474.7	1.3	1.2
062/63	17528.6	7337	16541	7192.8	1.06	1
063/64	19707.5	5351.3	19515	5340	1	1
064/65	18919.4	10612	18223	10905	1.04	1
065/66	19313.45	7981.7	18869	8123	1.02	1
Average					1.42	1.04

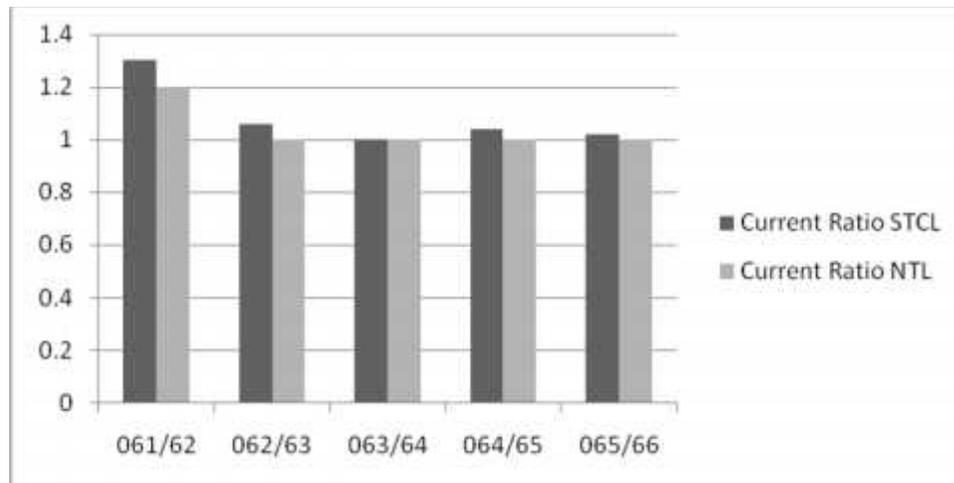
(Source: Annual report of STCL & NTL 061/62 to 065/066)

In the above table, we can see that the current ratios of STCL are 1.3, 1.06, 1, 1.04 and 1.02 for the year 061/62 to 065/066 respectively. In the year 061/62 there is highest ratio i.e. 1.3 during the study period. The average ratio of the 5 years period is 1.42. From the above study, it is concluded that STCL is not able to maintain standard ratio of 2:1 which shows poor liquidity position.

Similarly, current ratios of NTL are 1.2, 1, 1, 1 and 1 for the year 061/62 to 065/66 respectively. In the year 061/62 there is highest ratio i.e. 1.2 and the year 061/62 to 065/66 there are lowest ratio i.e. 1 during the study period. The average ratio for the 5 years period is 1.04. In comparison with STCL the current ratio in average of NTL are lower than STCL. Both company's ratios are below the standard.

Figure: 4.7

Graphical Presentation of Current Ratio of STCL and NTL



Quick Ratio

Quick ratio establishes a relationship between quick assets and current liabilities. An asset is liquid if it can be converted into cash immediately. It is calculated as under:

$$\text{Quick Ratio} = \frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}}$$

The quick assets, current liabilities and quick ratio of STCL and NTL are presented below:

Table No. 4.14

Quick Ratios of STCL and NTL

YEAR	Quick Assets		Current Liabilities		Quick Ratio	
	STCL	NTL	STCL	NTL	STCL	NTL
061/62	9629.7	3531.3	16541	7192.8	0.6	0.5
062/63	10942	1223.4	19515	5340	0.6	0.2
063/64	11775	7471.5	18223	10904.7	0.6	0.7
064/65	12659	7166	18082	10254.7	0.7	0.7
065/66	12217	7319	18152	10580	0.65	0.675

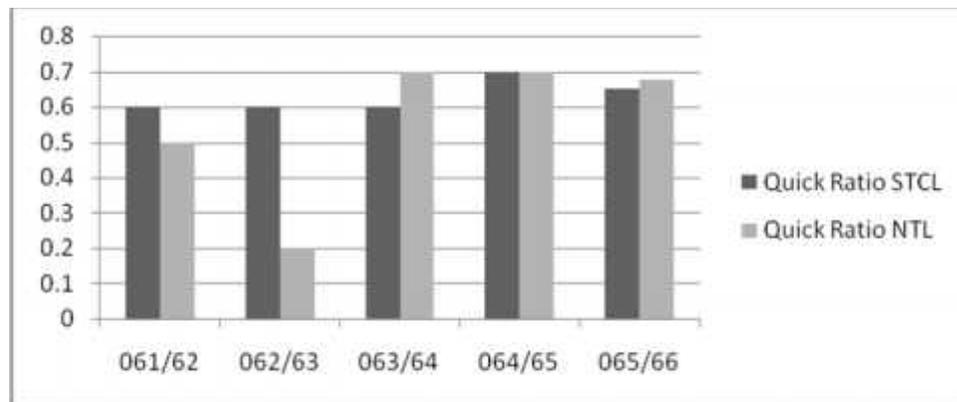
(Source: Annual report of STCL & NTL (061/62 to 065/66))

As a conventional rule quick ratio 1:1 or more is considerable satisfactory. In the above table quick ratio of STCL are 0.6, 0.6, 0.6, 0.7 and 0.65 for the fiscal year 061/62 to 065/66 respectively. The average ratio for the 5 years is 0.68. It cannot meet the satisfactory level.

Similarly quick ratios of NTL are 0.5, 0.2, 0.7, 0.7 and 0.67 for the fiscal year 061/62 to 065/66 respectively. The average ratio for the 5 year period is 0.5. In comparison with NTL, the quick ratio in average of STCL is higher. Both company's quick ratios are below the standard.

Figure: 4.8

Graphical Presentation of Quick Ratio of STCL and NTL



Inventory Turnover Ratio

Inventory turnover ratio indicates the efficiency of the firm in producing and selling its product. It is calculated by dividing cost of goods sold by the average inventory.

$$\text{Inventory turnover} = \text{Cost of goods sold} / \text{Average Inventory}$$

The average inventory includes the average of opening and closing balance of inventory. Cost of goods sold, inventory and inventory turnover ratio of STCL and NTL are presented below:

Table No. 4.15

Inventory Turnover Ratios of STCL and NTL

Year	Cost of goods sold		Average inventory		Inventory turnover ratio	
	STCL	NTL	STCL	NTL	STCL	NTL
061/62	19372	7580.6	6302.8	3674.8	3.1	2.1
062/63	15921	3266.6	8332.4	3966.8	1.9	0.8
063/64	16445	9218.4	7955	7955	2.1	1.1

064/65	18376	8939.6	6630.3	10579.7	2.8	0.8
065/66	17410.5	9079	7292.65	9267.35	2.45	1.7

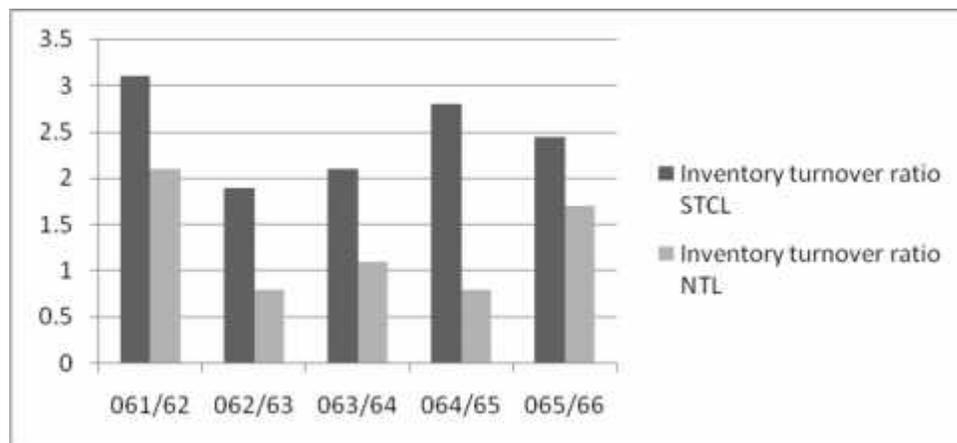
(Source: Annual report of STCL & NTL 061/62 to 065/66)

The above table clears that STCL is turning its inventory of finished goods into sales 2.47times in average per year. In other words, it holds average inventory of 12 months/2.47 = 4.85 months or 360/2.47 = 146 days.

Where, NTL is turning its inventory of finished goods into sales 1.30 times in average per year. In other words, it holds average inventory of 12 months/1.30 =9.23 months or 360/1.3 =277days (app.). Comparatively the inventory turnover ratio in average of STCL is higher than NTL.

Figure: 4.9

Graphical Presentation of Inventory Turnover Ratio of STCL and NTL



Total Assets Turnover Ratio

This ratio shows the firm's ability in generating sales from all financial resources committed to total assets. It reflects the firm's ability and efficiency in utilization of total assets in generating sales and profit from all financial resources committed to total assets. High assets turnover ratio indicates the total resources have been well managed and over investment in assets represents the low assets turnover ratio.

Thus,

$$\text{Total Assets Turnover} = \text{Sales} / \text{Total Assets}$$

Total assets include net fixed assets and current assets. The total assets turnover ratio is the relation between sales and total assets. The total assets, sales and total sales turnover ratio of STCL and NTL are presented below:

Table No. 4.16

Total Assets Turnover Ratios of STCL and NTL

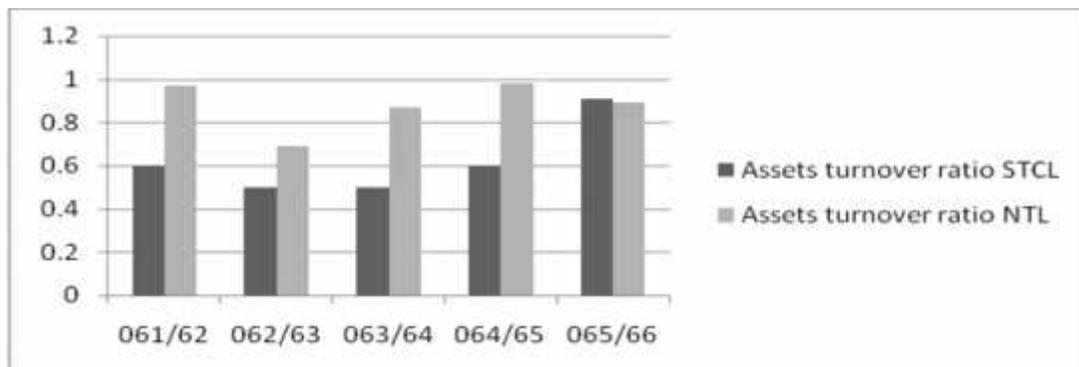
Year	Total Sales		Total Assets		Assets turnover ratio	
	STCL	NTL	STCL	NTL	STCL	NTL
061/62	21939	8091.4	35878	8288.7	0.6	0.97
062/63	18506	4075.5	38061	5921.4	0.5	0.69
063/64	19162	9686.08	36385	11122.4	0.5	0.87
064/65	21390	10353.4	36223	10526.3	0.6	0.98
065/66	20276	15147.9	22200	20616	0.91	0.89

(Source: Annual report of STCL & NTL 061/62 to 065/66)

The above table clears that the Total assets turnover of 0.62 times average of study period implies that STCL generates a sale of Rs. 0.62 for one rupee investment in fixed and current assets together. In the other hand the total assets turnover of times average of study period implies that NTL generates a sale of Rs.0.88 for one rupee investment in fixed and current assets together. In comparison with STCL, the total assets turnover ratio in average of NTL is higher.

Figure: 4.10

Graphical Presentation of Total Assets Turnover Ratio of STCL and NTL



Net Profit Margin Ratio

Net Profit is obtained when operating expenses interested and taxes are subtracted from the gross profit. The net profit margin ratio is measured by dividing profit after tax by sales

$$\text{Net Profit Margin} = \text{Profit after tax}/\text{Sales}$$

Net profit margin ratio establishes a relationship between net profit and sales indicates management efficiency in manufacturing administrating and selling the products. This ratio is the overall measure of firm's ability to turn each rupee sales into net profit. The profit after tax, sales and Net Profit Margin Ratio of STCL is presented below:

Table No. 4.17
Net Profit Margin Ratios of STCL and NTL

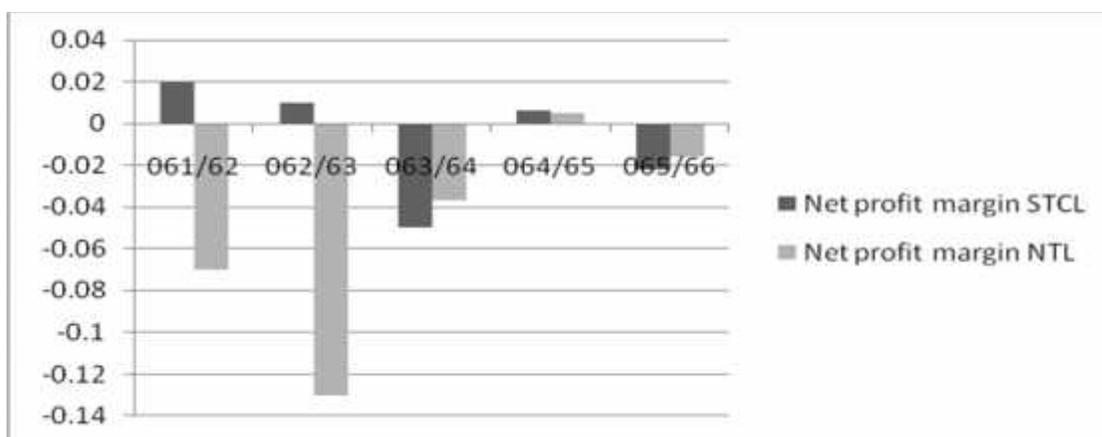
Year	Profit after tax		Sales		Net profit margin	
	STCL	NTL	STCL	NTL	STCL	NTL
061/62	498.07	-580.5	21939	8091.4	0.02	-0.07
062/63	290.5	-514.3	18506	4075.5	0.01	-0.13
063/64	-1037	-362.6	19162	9686.1	-0.05	-0.037
064/65	130.3	52.6	21390	10353	0.006	0.005
065/66	-453.35	-304.18	20276	10020	-0.022	-0.016

(Source: Annual report of STCL & NTL 061/62 to 065/66)

The above table clears that; if the non-operating income figure is substantial it may be excluded from profit after tax to see profitability arising directly from sales. For STCL operating profit after tax to sales ratio is 0.0012 in average during the study period. For NTL net profit margin ratio is negative during the study period.

Figure: 4.11

Graphical Presentation of Net Profit Margin Ratio of STCL and NTL



(Source: Annual report of STCL & NTL 061/62 to 065/66)

Interest Coverage Ratio

The interest coverage ratio indicates the firm's ability to meet interest obligations. This ratio is used to test the firm's debt serving capacity. It is computed by dividing EBIT by interest charge.

$$\text{Interest Coverage Ratio} = \text{EBIT/Interest}$$

The interest coverage ratio shows the number of times the interest charges are covered by funds that are ordinarily available for their payment. The interest charge, EBIT and Interest coverage ratios of STCL and NTL are presented below:

Table NO. 4.18

Interest Coverage Ratios of STCL and NTL

Year	EBIT		Interest		Interest coverage ratio	
	STCL	NTL	STCL	NTL	STCL	NTL
061/62	1904	-335	1200	222.8	1.59	-1.5
062/63	1953.8	-230.6	1540.2	300.7	1.27	-0.77
063/64	680.5	-64.8	1612	297.8	0.42	-0.22
064/65	1753.6	313	1529.6	260.5	1.1	1.2
065/66	1217	124.1	1571	279	0.76	0.49

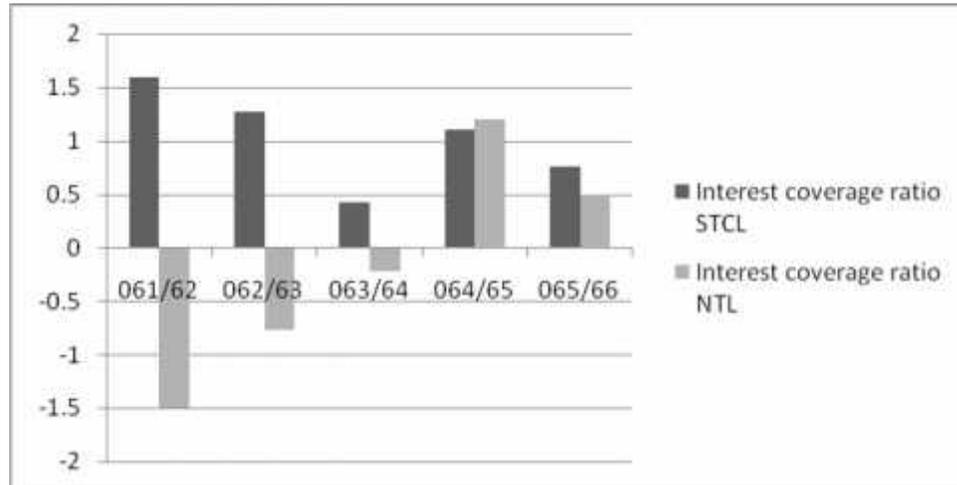
(Source: Annual report of STCL & NTL 061/62 to 065/66)

A higher interest coverage ratio is desirable but too high ratio indicates the firm is very conservative while using debt and lower ratio indicates excessive use of debt or insufficient operation STCL has 1.246 interest coverage ratios on an average which is not satisfactory. It indicates the high volume of external debt is used in comparison with its

EBIT. In the other hand, NTL has -3.49 interest coverage ratios on an average. It indicates low volume of external debt used in comparison with its EBIT.

Figure: 4.12

Graphical Presentation of Interest Coverage Ratio of STCL and NTL



Return on Equity Ratio

Common shareholders are entitled to the residue profits. The rate of dividend is not fixed. The shareholder's equity will include paid up capital, share premium and reserve and surplus less accumulated loss. The return on equity is net profit after taxes divided by the total preference shareholders equity and common shareholder equity. It is calculated as under:

$$\text{Return on Equity} = \text{Profit after tax} / \text{Shareholder's Equity}$$

ROE indicates how well the firm has used the resources of owner. The earning of a satisfactory return is most desirable objectives of a business. The profit after tax, shareholders equity and return on equity of STCL and NTL are presented below:

Table No. 4.19

Return on Equity Ratios of STCL and NTL

Year	Profit after tax		Shareholder's equity		Return on equity	
	STCL	NTL	STCL	NTL	STCL	NTL
061/62	498.07	-580.5	15707.8	1095.9	0.03	-0.53
062/63	290.5	-514.3	15489.4	581.56	0.02	-0.88
063/64	-1037	-362.6	13996.6	218.9	-0.07	-1.66

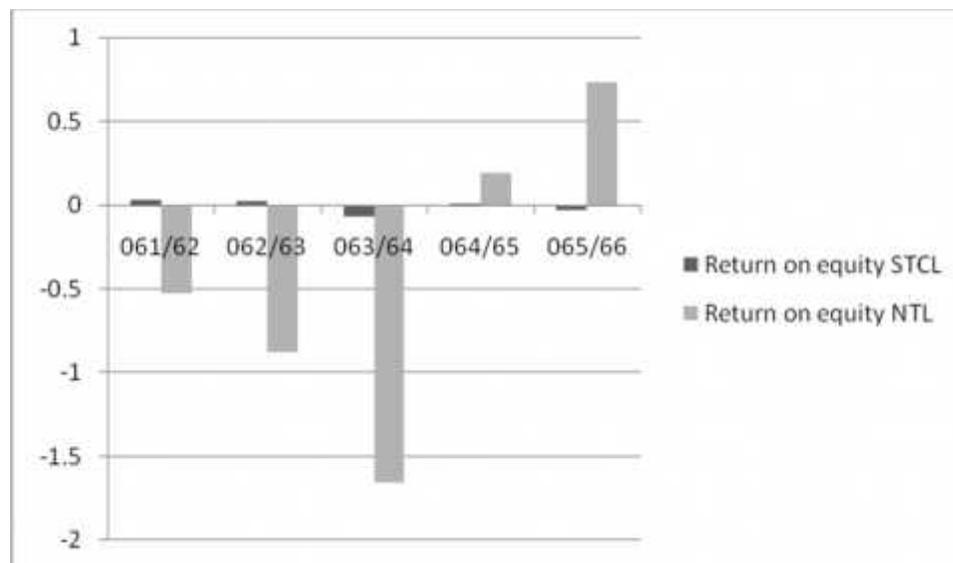
064/65	130.3	52.6	13765	271.5	0.01	0.19
065/66	454	-155	13881	245.2	-0.03	0.735

(Source: Annual report of STCL & NTL 061/62 to 065/66)

ROE of STCL is around 2% ROE of the company should be compared with the ratio of other similar companies like NTL. This will reveal the relative performance and strength of the company in attracting future investment. But ROE of NTL is negative this will reveal the relative performance and weakness of the company in future investment.

Figure: 4.13

Graphical Presentation of Return on Equity of STCL and NTL



4.2.8 Trend Analysis

In the financial analysis the direction of changes over a period of years is of crucial importance. Time series or trend analysis of ratios indicates the direction of change. This kind of analysis is particularly applicable to the items of profit and loss account. It might be found in practice that a number of firms would show a persistent growth over a period of years. But to get a true trend of growth the sales figures should be adjusted by suitable index of general prices. In other words, sales figures should be deflated for rising price level. When the resulting figures are shown on a graph, we will get trend of growth devoid of price changes. Another method of securing trend of growth is one, which can plot the output or physical volume of sales expressed in suitable units of measure. If the general price level is not considered while analyzing trend of growth, it can mislead management.

They may become unduly optimistic in periods of prosperity and pessimistic in dull periods.

For trend analysis, the use of index number is generally advocated. The procedure followed is to assign the number 100 to items of base year and to calculate percentage changes in each items of other year in relation to the base year. This procedure may be called as “trend-percentage method”.

The following table gives trend percentages for profit and loss statement and balance sheet items of Salt Trading Corporation Limited on the basis of year 060/61:-

Table No. 4.20
Salt Trading Corporation Limited
Trend analysis (%)

Particulars	061/62	062/63	063/64	064/65	065/66
Sales	56	47	49	55	52
EBIT	89	91	32	82	79
PAT	68	40	Loss	18	19
Current assets	114	128	123	122	122
Current liabilities	139	164	153	152	154
Fixed assets	298	296	295	292	289
Total assets	166	176	168	167	163
Investment	292	300	243	252	247

(Source: Annual report of STCL 061/62 to 065/66)

(Based on year 063/64)

The above table shows that the EBIT of STCL fluctuated faster than its sales while profit after tax also reveals a fluctuating trend. Current ratio and current liabilities move together. Current assets has both negative and positive trend, it may due to obsolesce of old machine and new machine should be purchased. Debtors are increasing as constant ratio while investments are decreasing. Fixed assets, total assets and investment all reveal fluctuating trend. So trend analysis shows that no any fiscal year of study period has not got more achievement than base year i.e. 061/62.

Similarly, the following table gives trend percentages for profit and loss statement and balance sheet items of National Trading Limited on the basis of year 061/62:-

Table No. 4.21
National Trading Limited
Trend analysis (%)

Particulars	061/62	062/63	063/64	064/65	065/66
Sales	83	42	99	106	103
EBIT	59	41	11	Loss	Loss
PAT	69	61	43	Loss	Loss
Current assets	140	102	202	192	197
Current liabilities	161	119	244	229	237
Fixed assets	101	107	109	137	133
Total assets	135	96	181	171	174
Investment	107	49	40	25	34.5

(Source: Annual report of NTL 062/63 to 065/66)

(Based on year 062/63)

From the above table it is clear shows that EBIT of NTL fluctuated faster than its sales while profit after tax also changes as EBIT. Current ratio and current liabilities move together. Current assets has both negative and positive trend, it may be due to obsolesces of old machine and new machine should be purchased. Debtors are increasing at constant ratio while investments are decreasing. So trend analysis shows that the last fiscal year of study period has got more achievement than others.

4.2.9 Identification of Cost Variability

Determination of variability of each expense in every enterprises is difficult task .The identification of expense variability should began with a careful study of each expense in the responsibility center under consideration. The purpose of this study is to identify those expenses that contain only fixed or variable component .When the fixed and variable expenses are separately identified the remaining expenses can be viewed as semi variable.

Fixed expenses are those that do not vary with output or productive activity. They remain constant in amount for a given period with a relevant range of an activity.

Variable expenses are activity based because they are incurred as a direct result of output, production activity or work done .Therefore these expense vary in direct proportion to change in output or activity in a responsibility center.

Semi variable expenses increases or decreases but not in proportion to change in activity base .Semi-variable expenses has some of the characteristics of both fixed and variable cost.

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 NTL and STCL has not maintained any clear-cut boundaries about classification of cost as fixed and variable .So for the purpose of the study, costs are classified as fixed and variable.

Table No. 4.22
Classification of costs of STCL and NTL (in lakhs)

Cost	STCL		NTL	
	Nature	Amount	Nature	Amount
Cost of sales	Variable	17410.5	Variable	9079
Administration expenses	Fixed	1481	Fixed	1555
Interest expenses	Fixed	1571	Fixed	279
Depreciation expenses	Fixed	51.7	Fixed	22.5

(Source: Annual report of STCL & NTL, 065/66)

4.2.10 Cost Volume Profit Analysis:-

The cost volume profit analysis is a device to study the behavior of profit in response to change in volume, cost and price. The breakeven analysis a popular form of the CVP analysis and indicates the level of sales at which revenue equal costs .The equilibrium point is called the breakeven point.

The contribution ratio also called P/V ratio, is equal to contribution (contribution per unit) divided by sales. Using contribution or P/V ratio, the breakeven point in rupees can be are as follows:

$$\text{Breakeven point (in Rs)} = \text{Fixed costs/P.V. ratio}$$

The excess of actual or budgeted sales over the break even sales is called the margin of safety. It indicates the extent to which sales may fall before the firm suffers a loss.

Salt Trading Corporation and National Trading Limited doesn't have any systematic variable budget, fixed budget, flexible budget and direct labor budget through they are important tools of BEP in STCL and NTL is calculated:

1. It is based on P/V account of year 065/66
2. Activity base is selected in terms of sales.
3. Selling price, fixed costs, inventory, variable costs are assumed constant.
4. According to variability costs are classified as fixed and variable.

Now the costs are already separated, so we can present the following table for BEP analysis.

Table No. 4.23
Sales Revenue, Fixed Cost and Variable Cost of STCL and NTL
(in Lakhs)

Items	STCL	NTL
Total Sales Revenue	20276	10020
Total Fixed Cost	2865.5	941
Total Variable Cost	17410.5	9079

(Source: Annual Report of STCL and NTL, 065/66)

I. Variable Cost Volume Ratio (V.V. Ratio):-

This ratio shows the proportion between variable cost and total sales revenue.

$$\begin{aligned}
 \text{V.V. Ratio of STCL} &= \frac{\text{Variable cost}}{\text{Sales}} \\
 &= 17410.5/20276 \\
 &= 0.858
 \end{aligned}$$

$$\text{V.V. Ratio of NTL} = \frac{\text{Variable cost}}{\text{Sales}}$$

$$\begin{aligned} & \text{Sales} \\ & = 9079/10020 \\ & = 0.90 \end{aligned}$$

The V.V ratio shows that the variable cost of STCL &NTL is 85.8% & 90% of sales revenue.

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

This ratio shows the proportion between contribution margin (sales-variable costs) and sales.

$$\begin{aligned} \text{P/V Ratio of STCL} &= \frac{\text{Contribution Margin}}{\text{Sales}} \\ &= 2865/20276 \\ &= 0.140 \end{aligned}$$

The P/V ratio will help to calculate the BEP of the company.

$$\begin{aligned} \text{BEP (in Rs)} &= \frac{\text{Fixed cost}}{\text{P/V Ratio}} \\ &= 2865/0.140 \\ &= 20464 \end{aligned}$$

$$\begin{aligned} \text{P/V ratio of NTL} &= \frac{\text{Contribution Margin}}{\text{Sales}} \\ &= 941/9079 \\ &= 0.10 \end{aligned}$$

The P/V ratio will help to calculate the BEP of the company.

$$\begin{aligned} \text{BEP (in Rs)} &= \frac{\text{Fixed cost}}{\text{P/V Ratio}} \\ &= 941/0.10 \\ &= 9410 \end{aligned}$$

This result shows that the company will break even when the sales revenue will be Rs 20464 & 9410 (in lakh) of STCL and NTL respectively. Salt trading corporation limited and National trading limited is not running at BEP. Most of the sales are around BEP only. During the year 063/064 of STCL sales were below the BEP so there is loss in company in year 065/066 sales is above than the BEP so there is high profit. Accordingly During the year 061/062 sales was below the BEP so there is loss in company.

4.2.11 Leverage

In general terms leverage may be defined as relative change in profits due to a change in sales. A high degree of leverage implies that a large change in profit occurs due to all relatively small change in sales. In business terminology, leverage is used in two senses:-

- a. Financial leverage
- b. Operating leverage

Financial leverage occurs when a firm borrows funds.

Operating leverage refers to the use of fixed cost in the operation of a firm.

Degree of operating leverage

The degree of Operating leverage may be defined as the percentage change in operating profits resulting from a percentage change in sales. Sometimes leverage is defined on the basis of BEP. A ratio between contribution margin and EBIT is known as percentage leverage.

$$\text{Degree of Operating Leverage} = \frac{\text{Sales} - \text{Variable cost}}{\text{EBIT}}$$

Actually STCL does not calculate DOL for its purpose. Here we have tried to measure the DOL by analyzing data and it is based on year 065/66.

$$\begin{aligned} \text{DOL of STCL} &= 20276 - 17410.5 / 1753.6 \\ &= 2865 / 1753.6 \\ &= 1.63 \end{aligned}$$

$$\begin{aligned} \text{DOL of NTL} &= 10020 - 9079 / 313 \\ &= 941 / 275.13 \\ &= 3.42 \end{aligned}$$

DOL of STCL 1.718 indicates that if sales increased by 100%, Operating profit increases by 163%. Accordingly DOL of NTL 4.516 indicates if sales increased by 100%, Operating profit increases by 3.42%.

4.2.12 Flexible Budget

The tool used by most companies to control overhead cost is called a flexible budget. A flexible budget covers a range of activity within which the firm may operate. A flexible budget is defined as a detail plan for controlling overhead cost that is valid in the firm's relevant range. Salt trading corporation limited and National trading limited does not prepare flexible budget. On the basis of cost and other data of year 065/66 the flexible

budget of STCL and NTL has been prepared as below. To prepare this budget sales revenue has been assumed to remain in the same ratio. Similarly variable cost ratio is remaining constant and fixed cost will also remain constant. To prepare flexible budget all cost should be separated as fixed and variable. Variable expenses changes on the change of level of activity but fixed cost remain constant. Flexible budget at different level of activity is prepared below assuming that during the year 065/066 the company has maintained 100% capacity.

Table No. 4.24
Flexible budget of Salt Trading Corporation Limited

(in lakhs)

Particular	Activity level in percentage				
	20%	40%	60%	80%	100%
Sales Revenue	4055.2	8010.4	12165.6	16220.8	20276
Less-Variable cost 85.9%	3479.36	6872.93	10438.9	13917.45	17396.8
Contribution Margin	575.84	1137.48	1727.52	2303.36	2879.20
Less- Fixed cost	2865	2865	2865	2865	2865
Net income or loss	(2289.16)	(1727.52)	(1137.48)	(561.44)	14.2

(Source: Annual Report of STCL, 065/66)

(Based on year 065/66 as 100% of its capacity)

This analysis shows the Contribution margin is 14.2% of sales So the level of activity if increases it is beneficial for company because the company is bearing high fixed cost.

The company can run in benefit if the level of activity is above 80% and less than 100% of its capacity. Above analysis shows that when the capacity increases the margin of profit is increases so the company always should try to increase the present capacity.

Table No. 4.25
Flexible budget of National Trading Limited

(in lakhs)

Particulars	Activity level in percentage				
	20%	40%	60%	80%	100%

Sales Revenue	2004	4008	6012	8016	10020
Less-Variable cost 90%	1803.6	3607.2	5410.8	7214.4	9018
Contribution Margin	200.4	400.8	601.2	801.6	1002
Less-Fixed cost	941	941	941	941	941
Net income or loss	(740.6)	(540.2)	(339.8)	(139.8)	61

(Source: Annual report of NTL, 065/66)

(Based on year 065/66 as 100% of its capacity)

This analysis shows the Contribution margin is 10% of sales So the level of activity if increases it is beneficial for company because the company is bearing high fixed cost. The company can run in benefit if the level of activity is above 100% of its capacity. Above analysis shows that when the capacity increases the margin of profit is increases so the company always should try to increase the present capacity.-

4.3 ANALYSIS OF PRIMARY DATA

The primary data analysis is based on the eight questions and their responses given by the officials of the two trading companies. Total eighteen questionnaires forms are distributed among the two companies and only twelve respondents gave responses to these questions. Respondents are divided in two groups' one sale and purchase department and next are administration department. Sales and purchase department includes the personnel's working in the sales and purchase department and administration department includes the personnel working in this department. They are managers, accountants and others subordinates. Out of twelve respondents four respondents are sales and purchase department and eight from administration department.

The following table shows the group of respondents:

Table No 4.26
Group of Respondents

Company	Group of Respondents		Sample Size
	Sales/Purchase Dept.	Administration Dept.	
STCL	2	4	6
NTL	2	4	6

Total	4	8	12
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(Source: ANNEX: 1)

4.3.1 Opinion towards taking the corrective actions for re-planning

Out of 12 respondents about the opinion towards taking the corrective actions Yes and No for re-planning, their views as follows:

Table No. 4.27

Opinion towards taking the corrective actions for re-planning

Respondents	Limited	Yes	No	Total
Sales & Purchase Department	STCL	2		2
	NTL	1	1	2
Administration Dept.	STCL	3	1	4
	NTL	2	2	4
Total		8	4	12
Result (%)		66.67	33.33	100

Source: (Opinion survey, ANNEX: 1, Question: 4)

From the above table, out of two respondents of sales and purchase department of STCL, two say Yes and nobody says no. Similarly out of two respondents of NTL, one says yes and one says no for taking action for re-planning. And out of four respondents of Adm. Dept. of STCL, three say yes and one say no however, out of four respondents of Adm. Dept. of NTL, two say yes and two say no for taking action for re-planning. But in reality it is not clear that both corporations are taking corrective action for re-planning in practice, it is not seen.

4.3.2 Opinion towards preparation of a long term sales plan

Respondent's views are follows: **Table No. 4.28**

Opinion towards preparation of a long term sales plan

Respondents	Limited	Yes	No	Total
Sales & Purchase Department	STCL	1	1	2
	NTL		2	2

Administration Dept.	STCL	1	3	4
	NTL	1	3	4
Total		3	9	12
Result (%)		25	75	100

Source: (Opinion survey, ANNEX: 1, Question: 5)

Here in this question their opinion divides in two sides. Out of four respondents of Sales & purchase dept. of two trading, one says yes and three say no regarding the prepare a long term sales plan. Similarly, Out of eight8 respondents of Adm. Dept. of two trading, two say yes and six say no regarding the preparation of a long term sales plan. Together 75% respondent's opinion demise the preparation of long term sales plan. Similarly, 25% respondent's opine that their organization prepare a long term sales plan. But in reality, it has not seen.

4.3.3 Opinion towards Promotional Medias are usually used

Respondent's views are:

Table No. 4.29

Opinion towards promotional Medias are usually used

Respondents	Limited	Electronics Media	Print Media	Total
Sales & Purchase Department	STCL	1	1	2
	NTL	1	1	2
Administration Dept.	STCL	2	2	4
	NTL	2	2	4
Total		6	6	12
Result (%)		50	50	100

Source: (Opinion survey, ANNEX: 1, Question: 6)

Here in this question respondent opinion divides equally in two sides. 50% respondents view that electronics media and other 50% respondent view that print media are used for promotional activities.

4.3.4 Opinion towards satisfactory level of achievements.

Respondent's views are:

Table No. 4.30

Opinion towards satisfactory level of achievements.

Respondents	Limited	Yes	No	Total
Sales & Purchase Department	STCL	1	1	2
	NTL	1	1	2
Administration Dept.	STCL	1	3	4
	NTL	1	3	4
Total		4	8	12
Result (%)		33.33	66.67	100

Source: (Opinion survey, ANNEX: 1, Question: 7)

Most of the respondents do not agree that the achievements are satisfactory of the STCL and NTL. Out of six respondents of STCL, two respondents say yes and four say no. similarly, out of six respondents of NTL, two say yes and four say no. It means that 66.67% of respondents do not agree that the achievements of both trading concern are not satisfactory.

4.3.5 Opinion towards the establishment of clear departmental goal for each and every department.

Respondent's opinions as follows:

Table No. 4.31

Opinion towards the establishment of clear goal for each and every department

Respondents	Limited	Yes	No	Total
Sales & Purchase Department	STCL	1	1	2
	NTL		2	2

Administration Dept.	STCL	1	3	4
	NTL	1	3	4
Total		3	9	12
Result (%)		25	75	100

Source: (Opinion survey, ANNEX: 1, Question: 8)

Most of the respondents do not agree that there exists the clear goal of each and every departments of STCL and NTL. Out of six respondents of STCL, two say yes and four respondents say no. Similarly, out of six respondents of NTL, one says yes and five say no. It shows 75% respondents do not agree that there is clear departmental goal of each and every department of STCL and NTL.

4.4 MAJOR FINDINGS OF THE STUDY

4.4.1 Findings from Secondary Data

Salt Trading Corporation Limited

-) Sales trend of STCL shows the negative directions for future which can decrease the profitability for future. It is an established trading corporation of Nepal that provides qualitative products at reasonable price which indirectly supports for health organizations and it deals about the products which are not luxurious.
-) It is a successful trading organization in view of profit making since there is loss only in one fiscal year during the study period and the trend of profit is negative.
-) STCL has not clear-cut goals, objectives, policies since the corporation has not prepared budgeted forecast for the future program such as budgeted sales, production, purchase, material and other overhead budgets.
-) STCL has no any effective program to achieve desired goals and objectives to overcome the existing problems and challenges. There is no proper planning of raw material or there is no clear-cut and effective policy regarding inventory and purchase of raw material.
-) The company has not applied the system of flexible budget and trend analysis. The analysis of flexible budget shows that the company will earn profit when it runs at

more than 80% capacity. Cost structure of STCL is not classified in accordance to their variability and cash flow planning is not made.

National Trading Limited

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 of performance to find the underlying causes of poor achievements. Budgeted sales are higher than actual sales.

) There is positive correlation coefficient between budgeted sales and actual sales due to lack of market survey and poor policy as to sales and inventory. It seems that budgeted that budgeted purchase is higher than actual purchase.

) There is positive correlation coefficient between budgeted purchase and actual purchase due to poor policy to purchase goods and inventory management. Purchasing cost and direct expenses of NTL covers about 85% or more of total expenses.

) Financial position of NTL is not satisfactory. There is nominal net profit margin, assets turnover ratio and return on sales. There is decreasing trend of debt to total assets ratio, current and quick ratio is not satisfactory.

) There is low degree of positive correlation between sales and profit and negative correlation between net profit margin and inventory turnover, between net profit margin and assets turnover and between net profit margin and fixed assets turnover.

) The management of NTL applied annual sales and purchase budget. There is substantial gap between target and achievement each year. There is not complete and comprehensive budgeting system.

) NTL does not prepare the long term strategic profit plan but prepare short term plan, which is referred as budget.

) NTL is operating above BEP and enjoying profit but not appropriate. There is lack of cost classification and cost control program.

) No proper management to supply NTL's goods in the rural areas. It has not achieved the target sales and purchase due to the lack of autonomy, suffering from

overstating and corruption, lack of moral and motivation in employees, intervention by government, not intra and inter department co-ordination, lack of clear cut objectives of NTL and top level management are only involved in planning and decision making and lower level participation is not encouraged.

4.4.2 Findings from Primary Data

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

-) Performance of STCL during the establishment period was highly satisfied in the view of its liquidity position and the other financial ratio. Obviously the limited is applying many strategies to fulfill and establish the objectives of the limited. Like target sales achievement strategy, providing best facilities to the customer
-) Since the last many years both limited corporations are suffering from the many kinds of obstacles. The main is political influence which is affecting it in very bitter way. The change of the government gives new management leader to drive the limited. The organization is the place of providing employment for the political parties. Their direct interference in corporation is the main cause of increasing cost. Comparatively STCL is performing well than NTL. But over staffing employee is one of the bitterest cause's leading to limit in failure.
-) If we observe the annual performance of the both organization, they have earn very little profit in comparison to loss. According to STCL when it has earning profit it was earning two to five crores but it is suffering loss more than ten crores at ones. According to the both limited they are taking many plans to correct their previous weaknesses, but exactly they don't know what plan they took. Only they focus their words on providing best facility to customer.
-) According to the respondents both organization performance is not well but the top level are very confident that only the profit does not measure the performance.

According to them the main thing is that they are providing best services in the competitive market to the customer.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY

In this present era industrialization has become essential element for the development of the countries. Many western countries are more than hundred years developed than like our countries due to technology which is the factor of industrialization. Industry promotes economic development by providing employment. Different public enterprises in different economic sector of the country were established for the growth of industrialization For the development of our country industrialization is the most important sector.

Salt Trading Corporation Limited is a trading organization. Its main objective is to provide the qualitative products which are as preventive medicine for the people. National Trading Limited is a merchandising enterprise. Its main objective is to provide the goods to general people at a reasonable price in order to get the reasonable profit. Their main objective is to provide goods to general people at a responsible price in order to get the reasonable profit and to act as an agent of government in the matter of import and distribution of the goods which the government has to import and distribute time to time and to handle the commodity aid goods received by the government.

Profit planning is the systematic and continuous process to achieve certain objectives for specific time. It is the management tool rather than end and to cope the objective of the enterprise. Profit plan starts from planning sales for the future. Success and failure of the organization depends upon sales plan. It reduces uncertainty of future revenue.

Merchandising planning is made on the basis of sales and inventory. Similarly other expenses plans are prepared on the basis of production plan. Five year data (2060/61-2064/65) is analyzed to find out strength and weakness of NTL and STCL. Mean standard deviation, correlation, regression analysis, coefficient of variance, time series, probable error of r is used to find out the nature of data.

5.2 CONCLUSION

National Trading Limited

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

The following major conclusions have been drawn on the basis of the different analysis, observation and informal discussions.

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 of performance to find the underlying causes of poor achievements that so why budgeted sales are higher than actual sales. There is positive correlation coefficient between budgeted sales and actual sales due to lack of market survey and poor policy as to sales an inventory.

NTL budgeted that budgeted purchase is higher than actual purchase. There positive correlation coefficient between budgeted purchase and actual purchase due to poor policy to purchase goods and inventory management. Purchasing cost and direct expenses of NTL covers about 85% or more of total expenses. Financial position of NTL is not satisfactory. There is nominal net profit margin, assets turnover ratio and return on sales. There is decreasing trend of debt to total assets ratio, current and quick ratio is not satisfactory.

There is low degree of positive correlation between sales and profit and negative correlation between net profit margin and inventory turnover, between net profit margin and assets turnover and between net profit margin and fixed assets turnover. The management of NTL applied annual sales and purchase budget. There is substantial gap between target and achievement each year. There is not complete and comprehensive budgeting system. NTL does not prepare the long term strategic profit plan but prepare short term plan, which is referred as budget. NTL is operating above BEP and enjoying profit but not appropriate. There is lack of cost classification and cost control program.

There is proper Channel to supply NTL's goods in the rural areas. NTL has not achieved the target sales and purchase due to the lack of autonomy, is suffering from overstating and corruption, lack of moral and motivation in employees, intervention by government,

not intra and inter department co-ordination, lack of clear cut objectives The top level management are only involved in planning and decision making and lower level participation is not encouraged. NTL does not fix the target for specific goal for the budgeted period. For example growth objective, return on capital etc. are not targeted to achieve some specific level. NTL has not adequately considered controllable and non-controllable variables affecting it. NTL possesses the following strengths and weaknesses.

Strength and Weakness of NTL

a. Strengths: - varieties of goods

- duty free goods
- foreign goods
- experienced staff

b. Weaknesses:-

- political interventions
- competition with private sectors
- lack of skill planners and decision makers

Salt Trading Corporation Limited

Sales trend of STCL shows the negative directions for future which can decrease the profitability in future. As a trading corporation of Nepal it provides qualitative products at reasonable price which indirectly supports for health organizations and it deals about the products which are not luxurious.

It is a successful trading organization in view of profit making since there is loss only one fiscal year during the study period and the trend of profit is negative. STCL has not clear-cut goals, objectives, policies since the corporation has not prepared budget forecast for the future program such as budgeted sales, production, purchase, material and other overhead budgets. STCL has no any effective program to achieve desired goals and objectives to overcome the existing problems and challenges.

There is no proper planning of raw material or there is no clear-cut and effective policy regarding inventory and purchase of raw material. The company has not applied the system of flexible budget and trend analysis. The analysis of flexible budget shows that the company will earn profit when it operates at more than 80% capacity. Cost structure of STCL is not classified in accordance to their variability and cash flow planning is not made. On the basis of different analysis, observations and informal discussion the following conclusions have been drawn.

Most of the Nepalese manufacturing corporations don't have clear goals and objectives. The same applies trading concern also. Goals and objectives are controversial. There is conflict between profit and social goals. Without clear goals and objectives there is no basic foundation for planning. In Nepalese manufacturing corporations there is no real practice of profit planning and if planning system are followed there exists poor implementation of plan. Plans are prepared on the adhoc basis rather than on the analysis of whole operating environment.

In Nepalese trading corporations, the goals and objectives of the organization are not communicated to lower level. Consequently there is gap between planned and actual achievement which is also applicable in case of STCL. STCL has not clearly defined its annual goals. There are no plans in different areas such as expansion, development of products I different geographic areas all over the country. In the past, STCL has got monopoly in the sector of its products. Some products that were dealing by STCL have been cancelled and some new products have been added. This is the reason of rigid decision.

STCL has no separate costing department. Costing is done by traditional methods; no precise distinction has been made regarding the nature of cost as fixed or variable, direct or indirect etc. There is no separate costing system for each product by allocation of expenses. STCL has lack of planning experts, skilled planners and entrepreneurship. The sales trend of the corporation is in fluctuating trend but during recent years it is decreasing slowly which is expected in future also.

The pricing policy of the corporation is also the causes of loss. The corporation has not followed any pricing methods. The pricing has made on adhoc basis. STCL has not any

plan to evaluate the profitability of each product separately. It is not able to drop the loss bearing products. There is not clear record of each product's contribution in profit and loss. STCL has no periodic performance evaluation system so that it unable to take any corrective action immediately, if any disturbance and obstacle occurs.

STCL do not prepare sales budget, production budget, purchase budget, direct labor budget etc. separately. Due to this it is difficult to search the variance between planned an actual performance. Job definitions, management information system, and performance based career- development opportunities; strategic planning exercises are not well developed.

Salt Trading Corporation Limited has no depth analysis of the company's strength and weakness. The present study locates the following strengths and weaknesses of the corporation.

a) Strengths:-

- i. Good distribution network
- ii. Great financial strength in beginning the study period.

b) Weaknesses:-

- i. Lack of professional and market oriented management and decision making style.
- ii. Lack of proper planning and control system.

5.3 RECOMMENDATIONS

Recommendations to STCL

After the detail analysis of profit planning of Salt Trading Corporation Limited, some suggestions have been recommended on the basis of major findings. To improve the performance of the corporation, 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 in STCL.

-) STCL should formulate clear-cut goal, objectives, policies, long-term plan, strategic program etc.
-) Participative management should be introduced in formulation of plans and policies of the organization. Profit planning manuals should also be communicated to lower level of management. Effective budget education should be provided to improve profit planning system in future trend of STCL.
-) Cost should be classified into fixed and variable. These costs should also be diagnosed as controllable and non-controllable expenses. The corporation has not made any efforts to reduce controllable costs. So cost control programs are not effectively applied in STCL.
-) STCL should develop overhead budget in systematic way. All overhead expenses should be classified in separate heading. Selling and distribution cost should be introduced separately so that it will be helpful for the management of STCL to control expenses for company.
-) Cash flow plan should be adequately prepared in STCL. There is no detail description of sources of cash and uses of cash. It has also not plan of interim financing, in case of cash shortages and interim investing, in case of excess cash.
-) To improve profit planning system in STCL, trained and qualified manpower should be improved. For this staff should be properly trained. Marketing specialist should be appointed to increase present sales volume and to find new profitable potential areas.
-) Periodic performance reporting system should be followed to take corrective action and to improve the performance. Variance regarding sales, production materials, labors, profit and cost should be diagnosed and identified as controllable and non-controllable.
-) Demand of the products of STCL is very high in national and international market. So this corporation has no problem in selling its products. So research and development of new market is essential for increment of its sales.
-) STCL should prepare strategic and tactical profit plan. So that more detail information about manpower planning, inventory and raw material planning, capital expenditure planning, sales planning, production planning will be easily

achieved and performance evaluation will be more effective and that will help to improve weakness of the corporation.

) Cost volume profit relationship should be considered while fixing price and quantity of sales.

) The corporation should adopt expenditure planning in advance and in detail. Decision of capital addition should be made after analyzing and evaluating the alternatives .Discounted cash flow technique should be applied while evaluating the proposal of capital addition .In addition to this, timely preventive maintenance should be undertaken to operate the factory department.

) Finally, the corporation should adopt comprehensive profit planning approach. Basic fundamentals of profit planning should be considered while formulating and implementing profit plan

Recommendations to National Trading Limited

The following recommendations can be given to formulate and implement the profit plan and improve the financial soundness of the NTL.

) NTL should develop specific goals for the coming budget. Such goals may be net profit on sales, return on capital employed, increase in sales revenue, increase in cost effectiveness etc, Without such goals the operation of the NTL may not be effective.

) There should be serious analysis of relevant, internal and external variables and their possible impact of purchases, sales, and inventory and ultimately in profit. For this strength and weakness of NTL should be analyzed.

) There should be increase in sales and purchases each year. For this capital expenditure and employee utilization and inventory policy should be considered.

) Budget should be prepared in realistic ground. NTL should try to minimize the gap and find out causes of variation between planned and actual results.

) NTL should study the present cost structure and develop cost effectiveness program. For planning profit, there should be a good system of dividing cost into fixed and variable.

) To meet the desired sales target, NTL should try to increase sales centers, media support for publicity of its products and to survey the market.

-) To increase the financial performance of NTL, capital, manpower and available assets and resources should be maximum utilized rather than increasing the volume.
-) NTL Should focus on purchasing and direct expenses because these expenses cover about 89% or more .It would be better for NTL to increase the cost efficiency.
-) For increasing the productivity of NTL, it should adopt the method of performance evaluation .Favorable and unfavorable variance should be analyzed and fulfill deficiencies and correct the corresponding action.
-) Cash budget and capital expenditure Budget should be considered in order to make proper use of cash and make investment decision.
-) Long term strategy should be prepared in order to meet the long term objective and save the way for the future.
-) NTL should consider certain management, marketing and financial issues .There should be motivation in employees, co-ordination within organization, participation and employees and they can be held accountable for their authorities and responsibilities.NTL should aware of supplying the goods in rural areas at reasonable price.

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ANNEX

Annex: 1

Date:

Dear Sir / Madam,

I am conducting a Research in “A Comparative study on Profit Planning and Control System of of Salt Trading Corporation Limited and National Trading Limited. I would like to appreciate you providing me just few minutes of your busy schedule to answer the questions appearing in the enclosed questionnaire. Each response will be anonymous findings of the research will be fruitful to know more about how was the PPC procedure of STCL and NTL. Each of your idea and opinion will be of great importance for present research.

Thank you for your co-operation and help

Sincerely Yours

Hari Shankar Mandal

Nepal Commerce Campus

Tribhuvan University

QUESTIONNAIRE

Name of the Respondent.....Date:

Position.....

Department:

1. Does your Organization apply and system of developing strategy to fulfill the established objectives?
2. On which place your organization has given more attention to fulfill the established objectives?
3. Would you please state the main cause for the sound economic position and better achievement?
4. Does your organization the corrective actions for re-planning?
 - a. Yes ()
 - b. No ()
5. Does your organization prepare a long term sales plan?
 - a. Yes ()
 - b. No ()
6. What promotional Medias are usually used?
 - a. Electronics media
 - b. Print media
7. Are the achievements of your organization satisfactory?
 - a. Yes ()
 - b. No ()
8. Is there a clear departmental goal for each and every department in your organization?
 - a. Yes ()
 - b. No ()

Annex: 2

Time Series Analysis of Salt Trading Corporation Limited

Fitting straight line trend by least square method

(in lakhs)

Year (X)	Actual Sales (y)	$x=X-X'$	xy	x^2
061/62	21339	-2	-43878	4
062/63	18506	-1	-18506	1
063/64	19162	0	0	0
064/65	21390	1	21390	1
065/66	20276	2	40552	4
Total	$\Sigma y = 100637$	$x = 0$	$\Sigma xy = -442$	$x^2 = 10$

(Year 063/64 is taken for based year)

$$a = \frac{y}{n} = \frac{100637}{5} = 20127.4$$

$$b = \frac{\Sigma xy}{\Sigma x^2} = \frac{-442}{10} = -44.2$$

$$y = a + bx$$

$y = 20127.4 - 44.2x$ is the trend line of sales figure which shows the negative sales figure is future.

By using this trend equation we can estimates the actual sales for year 065/66.

For the estimation 066/67 (taking 063/64 based year)

$$y = 20127.4 - 44.2 \times 3$$

$$= 19994.8$$

If the trend does not change, possible sales for the year 066/67 will be Rs. 19994.8 (in lakhs) i.e. Rs. 1999480000.

Annex: 3

Time Series Analysis of National Trading Limited
Fitting the straight line trend by least square method

(in lakhs)

Year (X)	Actual Sales(y)	$x=X-X'$	Xy	x^2
061/62	8091.4	-2	-16031	4
062/63	4075.5	-1	-4076	1
063/64	9686.1	0	0	0
064/65	10353	1	10353	1
065/66	10020	2	20040	4
Total	$y = 42226.3$	$x = 0$	$xy = 10286$	$x^2 = 10$

(Year 063/64 is taken based year)

$$a = y/n = 42226.3/5 = 8445.26$$

$$b = xy / x^2 = 10286/10 = 1028.6$$

$$y = a+bx$$

$y = 8445.26 + 1028.6x$ is the trend line of sales figure which shows the positive sales figure in future.

By using trend equation we can estimates the actual sales for the year 066/67.

For the estimation 066/67 (taking 063/64 based year)

$$y = 8445.26 + 1028.6 \times 3$$

$$= 11531.06$$

If the trend does not change possible sales for the year 065/67 will be Rs.11531.06 (in lakhs) i.e. Rs.1153106000.

Annex: 4

Profit and Loss of STCL and NTL
Fitting Straight Line by Least Square Method

(in lakhs)

Year (X)	Net Profit of STCL (y)	Net Profit of NTL (y1)	x = X - X'	(x) ²	Xy	xy1
061/62	498.07	-580.5	-2	4	-966	1161
062/63	290.5	-514.3	-1	1	-290.5	514.3
063/64	-1036.6	-362.6	0	0	0	0
064/65	130.3	52.6	1	1	130.3	52.6
065/66	205	274.67	2	4	410	549.34
Total	y = 87.37	y1 = -1130.13	x = 0	x ² = 10	xy = -716.2	xy1 = 2277.24

(Year 063/64 is taken for based year)

For STCL

$$a = \frac{y}{n} = \frac{87.37}{5} = 17.48$$

$$b = \frac{xy}{x^2} = \frac{-716.2}{10} = -71.62$$

We have the least square trend is $y = a + bx$

$$y = 17.48 - 71.62x$$

Since the equation is negative, this shows the negative trend in future.

For NTL

$$a = \frac{-1130.12}{5} = -226.024$$

$$b = \frac{2277.12}{10} = 227.712$$

We have the least square trend is $y1 = a + bx$

$$y1 = -226.024 + 227.712x$$

Since the equation is positive this shows the positive trend in future

Annex: 5

Actual Production is assumed as x and Actual Sales as y.

For STCL

Calculation of Mean, Standard deviation & Co-efficient of Variance of Actual Purchase

Fiscal Year	Actual Purchase (x)	$x-\bar{x}=U$	$(x-\bar{x})^2 = U^2$
061/62	17894	4200.6	17645040.36
062/63	12797	-896	802816
063/64	10083	-3610.4	13034988.16
064/65	13172	-521.4	271857.96
065/66	14521	-828	685584
n = 5	x = 68467	U = 0	U ² = 32440286.48

We have,

$$\text{Mean Actual Purchase } \bar{x} = \frac{\sum x}{n} = \frac{68467}{5} = 13693.4$$

$$\sigma x = \sqrt{\frac{\sum U^2}{n}} = \sqrt{\frac{32440286.48}{5}} = 1139$$

Co-efficient of Variation of Budgeted Purchase (C.V.) of x

$$= \frac{\sigma x}{\bar{x}} = \frac{1139}{13693.4} \times 100 = 8.31$$

Calculation of Mean, Standard deviation, C.V., of Actual sales:

Fiscal Year	Actual Sales (y)	$y-\bar{y}=V$	$(y-\bar{y})^2 = V^2$
061/62	21339	1684.4	2837203.36
062/63	18506	-1748.4	3056902.56
063/64	19162	-1092.4	1193337.76
064/65	21390	1135	1290496
065/66	20276	21.6	466.56
n = 5	y = 101273	V = 0	V ² = 8378406.24

$$\text{Mean Actual sales } \bar{y} = \frac{\sum y}{n} = \frac{101273}{5} = 20254.4$$

$$\sigma_y = \sqrt{\frac{\sum V^2}{n}} = \sqrt{\frac{8378406.24}{5}} = 578.90$$

Co-efficient of Variation of Budgeted sales (C.V.) of y

$$= \frac{\sigma_y}{\bar{y}} = \frac{578.90}{20254.4} \times 100 = 2.86$$

$$\begin{aligned} \text{Correlation of Coefficient (r)} &= \frac{\sum UV}{\sqrt{\sum U^2} \times \sqrt{\sum V^2}} \\ &= \frac{6676384.2}{\sqrt{32440286.48} \times \sqrt{8378606.24}} = \frac{6676384.2}{266445041.6} = 0.9537 \end{aligned}$$

Calculation of Probable Error (PEr)

$$\text{PEr} = 0.6745 \times \frac{1-r^2}{\sqrt{n}} = 0.6745 \times \frac{1-(0.95)^2}{\sqrt{5}} = \frac{0.6745-0.6116}{2.2360} = 0.0226$$

For NTL

Actual Production is assumed as x and Actual Sales as y then,

Calculation of Mean, Standard deviation & Co-efficient of Variance of Actual Purchase:

Fiscal Year	Actual Purchase (x)	$x - \bar{x} = U$	$(x - \bar{x})^2 = U^2$
061/62	7842.2	479	229421.85
062/63	3588.8	-3774.42	14246246.34
063/64	8230.9	867.68	752868.59
064/65	8692.2	1328.98	1766187.84
065/66	8462	1098.76	1207273.53
n = 5	x = 36816.1	U = 0	U ² = 18201998.16

We have,

$$\text{Mean Actual Purchase } \bar{x} = \frac{\sum x}{n} = \frac{36816.1}{5} = 7363.22$$

$$\sigma x = \sqrt{\frac{\sum U^2}{n}} = \sqrt{\frac{18201998.16}{5}} = 853.27$$

Co-efficient of Variation of Budgeted Purchase (C.V.) of x

$$= \frac{\sigma x}{\bar{x}} = \frac{853.27}{7363.22} \times 100 = 11.58$$

Calculation of Mean, Standard deviation, C.V., of Actual sales:

Fiscal Year	Actual Sales (y)	$y - \bar{y} = V$	$(y - \bar{y})^2 = V^2$
061/62	8091.39	-354	125316
062/63	4075.48	-4370	19096900
063/64	9686.1	1241	1540081
064/65	10353	1908	3640464
065/66	10020	1575	2480625
n = 5	y = 42226	V = 0	V ² = 26883386

$$\text{Mean Actual sales } \bar{y} = \frac{\sum y}{n} = \frac{42226}{5} = 8445$$

$$\sigma y = \sqrt{\frac{\sum V^2}{n}} = \sqrt{\frac{26883386}{5}} = 1037$$

Co-efficient of Variation of Budgeted sales (C.V.) of y

$$= \frac{\sigma y}{\bar{y}} = \frac{1037}{8445} \times 100 = 12.27$$

$$\begin{aligned} \text{Correlation of Coefficient (r)} &= \frac{\Sigma UV}{\sqrt{\Sigma U^2} \times \sqrt{\Sigma V^2}} = \\ &= \frac{21667681.24}{\sqrt{18201998.16} \times \sqrt{268833.86}} = \frac{21667681.24}{4266.37 \times 5184.91} = \\ &= \frac{21667681.24}{22120783.27} = 0.97 \end{aligned}$$

Calculation of Probable Error (PEr)

$$\text{PEr} = 0.6745 \times \frac{1-r^2}{\sqrt{n}} = 0.6745 \times \frac{1-(0.97)^2}{\sqrt{5}} = \frac{0.6745-0.6477}{2.2360} = 0.0118$$