

## CHAPTER-I

### INTRODUCTION

#### 1.1 General Background

Simply speaking that planning for profit is known as profit planning. Profit is the primary measure of business success. The objectives of a business firm may be to maximize its profit as well as render service. The both objective have a sharp link in the management of the organization, more over profit plays key role for achieving the objectives of organization so that profit is the lifeblood for every organization. Simply profit is the excess of income over expenses. Always the questions are arises now profit can be made? Are profit happened automatically? The answer should be searched for these who span life on the business. "Usually profits do not happen, profit are managed". We should understand the management concept of profits (Gurung: 2000)

No firm can predetermine accomplish its goals and objectives in the absence of proper and efficient planning because planning is the most function of management and all other functions are performed with in the framework of planning.

The concept and Technique of profit planning and control have wide application in the individual business or enterprises or government units or charitable organization and virtually and enterprises.

Profit planning and control has been developed recently as a most advanced approach to profit management. Profit planning and control is a new term in the literature of business. It is only a new term but it is not a new concept in management. The other terms which can be used in same context are comprehensive budgeting managerial budgeting and simply budgeting. "Comprehensive profit planning and control is viewed as a process designed to help management effectively perform significant phase of the planning and controlling function (Parajuli: 2006).

The Profit planning and control includes:-

1. Development and application of broad and long-range objectives of the enterprises.

2. Specification of enterprise goals.
3. Development of a strategic long-range profit plan detailed by assigned responsibilities (division, department & projects)
4. Establishment of a system of performance reports detailed by assigned responsibilities.
5. Development of follow up procedure

The development of the nation is possible only through the striving of the public enterprises as well. The success and failure of the enterprises in achieving the set goal depends upon their strategy, planning of various budget and financial performance. Nepal Water Supply Corporation and Nepal Telecom are a public utility enterprise, which are striving to achieve its objectives.

### **1.1.1 Public Enterprises**

Public enterprises are generally owned and or controlled by government and are usually autonomously organized with the government providing the initial capital and being responsible for a continuous overview of their activities.

In one way, public enterprises should play a vital role by supporting government's policies and programs for the socio-economic development and another for their own survivability and growth. Due to the various causes private sector are unable to invest sufficient capital for aggregate development of the country. Therefore, public enterprises are the backbone for industrialization and development of the country. (Shrestha:2005)

The first public enterprises of the world were established in the port of London authority of Britain, which was formed in 1908.

Dangol (2005), describes in his book the, "public enterprises is an institution operating service of an economic or social character on behalf of the government but an independent legal entity largely autonomous in its management though responsible to the public through government and parliament and subject to some direction by the government equipped on the other hand with independent and separate funds of its own and the legal and commercial attributes of a commercial enterprises."

According to the above definitions there will certain characteristics of PES:

1. Government ownership

2. Service oriented aim
3. Government controlled management
4. Artificial personality
5. Autonomous
6. Public accountability
7. Mobilization of internal resources.

### **1.1.2 Introduction of NWSC**

Nepal water supply corporation (NWSC) is an organization, which was set to serve the people with managed sewerage system in the urban area. Thus, the organization has great responsibility towards the people. NWSC the stated owned entity, which is the sole supplier of drinking water in the country, has distributed water as special by the Government.

Drinking water is not only the basic need of people but also it is an universal need. Water is not an important only for the human beings, but it is an impooprtant for animals too. On the other hand the sewerage system has too its own importance, there should be a good sewerage system for a healthy environment .Adequate provision of pure drinking water and proper management of sewerage system are basic facilities for the projection of health and sanitation in the community. Therefore, several drinking water projects have been implemented in the country since the launching of the five-year plan.

Water supply Corporation was established in 2030 BS under the development Act.The first drinking water scheme in Nepal was called "Bir Dhara" in 1995.The unit was set up by the British army with the objectives of providing drinking water amenities to Katmandu in 1895A.D or 1950 B.S. After the "Bir Dhara" system, the body called "Pani Adda"(Water office) is one of the oldest offices in the history of Nepal. It was based in Kathmandu .Later on; new schemes were also implemented in Kathmandu with a new system popularly known as "Tri Bhim Line". Until the year 1972, the department of irrigation and water supply was responsible body for water supply. Then the department of water supply and sewerage was created to carry out more time bond programs in the water supply and sewerage sectors throughout the

kingdom .Till then, the branch offices in Kathmandu Valley were better known as "Pani Gowswara".

The water supply and sewerage board was constituted in 1973 under the development board act to implement the projects financed under the International Development Association (IDA) to provide improved water and sewerage facilities to Kathmandu valley and Pokhara in more systematic manner. The first sewerage system in Kathmandu and Lalitpur was probably built in 1954B.S.

Water supply and corporation was established on 1<sup>st</sup>Shrawan 2041(16<sup>th</sup> July 1981) with the objectives of providing more autonomy in its operation and enabling it to function on commercial basis by dissolving the "water and sewerage supply Board". And since 2046B.S the water supply and sewerage corporation was converted into Nepal water supply Corporation. NWSC is fully government owned public utility established in 2046 B.S.Under the corporation Act.2046.It is the main supplier of drinking water in the areas specified by Nepal Government .Its main objectives are to provide pure drinking water and proper sewerage system to the areas specified by Government of Nepal.(www.nwsc.gov.np)

### **1.1.3 Introduction of the Nepal Telecom**

Nepal telecom was established on 2032/03/11 B.S. under Nepal telecommunication Act 1971 to provide reliable and affordable telecommunication services all over the country. Most rural areas of Nepal are characterized by low population density, long distances between settlement areas and unfavorable geographical and climatic conditions. Other difficulties are low education level, less job opportunities, low per Capital income, Increasing tendency of population to migrate to urban centers, poor, unreliable or non-existent public transport, irregular or no-existent power supply, poor health care and medical services, The basic objective of the need for providing telecommunication facilities in those rural areas is to trigger the development activities and to minimize above mentioned disadvantages, thereby improving the quality of life. NT is planning to serve rural areas by adopting various technologies. VSAT shall be deployed in high mountain areas and in those remote areas where other terrestrial systems are not feasible or viable, mid mountain areas and southern plain areas (Tarai Belt) shall be served by combination of wireless local loop (WLL),

VHF/UHF radio communication, small rural exchanges with copper network or other appropriate terrestrial systems.

Nepal Telecom is a wholly government owned public Sector entity, administrator by a government appointed Board of Directors, Which includes a chairman and four voting members. The board Includes NT's General Manger who chairs the meetings in the absence of the chairman. A Senior Officer of NT is appointed as a non voting secretary. NT, like other government owned Company. Is subjected to government regulations for investment plan approval, foreign credit access and staffing & employment conditions? However, more autonomy to the entity may be in the offing in near future, which shall be a part of the government's proposed deregulation and liberalization policy in the telecommunications Sector. NT's General Manager is the chief executive officer and is appointed by Government, Not by NT's Board of Directors ([www.ntc.net.np](http://www.ntc.net.np)).

NT is moving ahead to establish nationwide telecommunication infrastructure, the foundation for IT revolution in the country. In the view of unprecedented development in the world of information and telecommunication, NT is trying its best to make a quantum leap forward to expand services not only in urban areas but also in the vast rural areas. More efficiency, increased productivity, better consumer services and more professionalism in the management are the key areas NT will be giving top priority in the coming days of competitive environment in the telecom sector.

In its continued effort to satisfy the ever growing demand for telephone lines, NT has been augmenting its telephone exchange line capacity for the best interest of its valued customers. As per MIS reports of Chaitra 2059, the total installed capacity and distributed telephone line of NT has reached the 417919 and 359428 mark respectively. The total capacity includes all the telephone exchange, Rules and Rural exchange Spread throughout the country. Recently NT has 160 operational exchanges in 67 districts and the services are available in all the 75 districts in Nepal. All the exchange of the Kathmandu valley is linked by optical fiber SDH network. Outside the valley the exchanges between Bhairhawa-Butawal is also linked by optical fiber network. This shift towards the optical transmission systems has resulted in more reliable network significantly improved quality of voice and data transmission. The total number of trunk circuits is 50,700. This network enables NT to provide

telephone services to more than 1761 village development committee, metropolitan centers and main towns of the country.

## **1.2 Statement of the problem**

Any enterprises need profit to survive and complete in the market. The success or failure of an enterprise is measured on the basis of per unit profit or surplus or productivity improvement. Many PEs have not prepared both long range and short range plans regularly and also the objectives of short range plans have no relation with the long range planning control.

In context of Nepal, Both NWSC and NT are major leading public enterprises functioning in public utility sector. Both are most the basic infrastructures for the development of the nation. Without it no industrialization of the economy can be imagined. In this context, both organizations have a great role than other public enterprise as all manufacturing, non-manufacturing industries and government, depend upon information supplied by it. It is not facing marketing competition and is enjoying almost monopoly over the distribution of services. So Both Organization is large scale public enterprise of the country and an apex institution in the communication sector.

Most of the public enterprises of Nepal are in a big crisis. Some of them are liquidated. some are privatized and some PEs are in the process of privatization .the first privatization policy was introduced in united kingdom during 1980s and in Nepal it gained momentum after the restoration of multiparty democracy in1990 .at present among PEs of Nepal ,NT is regarded as one of the few successful corporation .but how long can this prosperity be continued ? This question is haunting and daunting to each and every conscious person. The monopoly of NT in telecom sector has ended. In this competitive and complex situation NT and all its stables should focus more towards customer.

Both organizations are a fully government-owned and government controlled organization. Government is looking toward to privatization of this organization and primary studies are being undertaken. However Both Organization has been victimized in different political movements. The major problems facing by NT are as follows:

1. Lack of proper execution of plan
2. Operating expenses of Both Organization (NT and NWSC) is in increasing trend as compared to increase in its activities.
3. Lack of adequate infrastructures.
4. Political interference.

The present study intends to analyze and examine the impact of budgeting on profitability in both Organizations. Furthermore the study tries to answer following questions:

1. What are the present position of relating to development and implementation of profit plan?
2. To what extent is the process of budgeting being followed by both Organization in developing and implementing profit plans?
3. What is the overall trend of budgeting?
4. What is the situation of budgeted and actual activities?
5. Whether the financial performance is sound or not?
6. What step should be taken to improve budgeting system and profitability in both Organizations?

### **1.3 Objectives of the study**

The major objective of this study is to assess the application of comprehensive profit planning and control or budgeting system in communication and water sector comparatively with the following specific objectives.

Other specific objectives of the study are:-

1. To examine the present condition of NT and NWSC about their services to the public and their contribution to the economic development of Nepal.
2. To analysis the production and sales budgets adopted by both organization (NT and NWSC).
3. To assess the financial performance and its effect on profitability of both organization (NT and NWSC).

#### **1.4 Significance of the study**

Budgeting is the key to the productive financial planning, so, all organizations running under commercial principle have to give emphasis in regard to this most important single tool while managing their physical and financial targets. Various function budgets are the tools for proper profit planning and control. This study is intended to analyses and examines the budgetary practices used in NT and NWSC. This study is concise, practical, usable and valuable to the major parties interested in the budgetary practice and profit planning and control. It will also be useful and beneficial to organizations, Nepal Government and other interested parties and stakeholders.

In every organization, the availability of the resources is scarce and out of these scarce resources, the objectives of the organization are to be accomplished. The financial performance of the organization depends upon the uses of its resources. PEs is getting loss day by day due to under utilization of available resources. As a result, most of the PEs has bad financial performance. Profit planning process is not applied in the real sense in Nepalese PEs.

The main reason to study this research work is to analyze and examine the profit planning system of the organization whether it is applying profit planning system of the properly or not? It also tries to analyze and examine the practice of preparing various functional budgets of NT and NWSC. Finding some problems faced by corporation, while developing and implementing the functional budget and to recommend some measure to improve profit-planning system as well as cost recovery system of corporation.

#### **1.5 Limitations of the study**

A research is a full blaze and vast investigation study for the settlement of the problems. So it needs full time, finance and authentic information. The main focus of this study is on the budgeting and profit planning of both organizations. There are more than dozen services on communication sector provided by NT and NWSC. Preparation of functional budget for each services requires large and many formats. It is difficult to cover all of them in individual's terms. Thus, in case of preparation of

functional budget, the study is limited on overall base of organization. Following factors have further limited the scope of this study:

1. The study covers a period of 6 years from (2009 to 2015) on the basis of historical records as provided.
2. Since the study deals with both organizations (NT and NWSC), the conclusion drawn from the study may or may not be applicable to other public enterprises.
3. The comprehensiveness and accuracy of the study is based on the data available from the management of both organizations and other sources.
4. As the data used are mainly secondary in nature, there may be the chances of error in such data.
5. This study is concentrated in accounting and financial aspects only.

## **1.6 Chapter Plan**

This study is divided into five different chapters:

- i. Chapter 1:- Introduction:  
This chapter contains the brief introduction of the subject matter i.e. background of the study, statement of the problem, need/scope of the study, focus, objective and limitation of the study.
- ii. Chapter 2:- Review of Literature:  
This chapter includes meaning of profit planning, types of planning, forecasting vs. planning, process limitation and component of profit planning, development of profit plan, various functional budgets and analysis of variance.
- iii. Chapter 3:- Research Methodology:  
This chapter acknowledges the research methodology used in this study. It consists of research design, sources of data, period covered, data processing procedure, tools and techniques of analysis used.
- iv. Chapter 4:- Data presentation and analysis:  
This chapter is truly an analytical section of the thesis. In this fifth chapter, data presentation and analysis with the help of selected tools and techniques have been included.
- v. Chapter 5:- Summary, Conclusions and recommendation:

This is the final part of the study. This part consists of summary of the overall study, conclusions from the analysis of data and put forward recommendation to improve the existing situation. Bibliography, Appendixes and other supporting document have also been incorporated of this study.

## CHAPTER-II

### REVIEW OF LITERATURE

#### 2.1 Conceptual Framework

Comprehensive profit planning and control is a new term in the business literature. Though it is new term, it is not a new concept in the management. The other terms, which can be used in same context, are comprehensive budgeting, managerial budgeting and simply budgeting. Profit planning is widely or extensively used subject in the management. To define the profit planning, it will better to define the concept of profit planning, the combination of two words profit planning.

#### Concept of Profit:-

The dictionary meaning of the term "profit" is "money" which is earned in trade as a production and selling goods and services ". The general understanding of profit is to achieve monetary advantage. Profit is the acid test of the individual's firm's performance. "Profit is the amount of revenue earned above the expenses incurred to operate the business. However, different scholars and concerned people have different ideas about profit. An economist assumes that profit is the reward for entrepreneurship for risk taking. A labor lender may view that profit is the measure of how effectively labor has produced a wage increased. An investor will view it as a measuring gauge of the return that he expects from his /her investment. Taxpayers or tax assessors may take it as a basis for determining income taxes. An accountant may view profit simply as the difference of revenue and expenses arises there from the business, which can shown as below.

$$\text{Profit} = \text{Total Revenue} - \text{Total Cost}$$

Hawley (2002), "profit is reward for risk taking in business. Schumpeter (1998), opines that an entrepreneur earns profit as reward for introducing innovation. Keynes(2001), holds the view that profit results from the favorable movement of general price levels. In view of Mrs. John Robinson and Chamberlain, the greater the degree of monopoly power the greater will be profits made by the entrepreneur.

Profit earning is the primary objectives of a business. No, business can service longer without profit and capitalistic economic dominated business, profit is industrial is a signal for the allocation of resources and a yardstick for judging managerial efficiency.

The accounting concept of company, profit is a concept of net business income. The sales transactions of a period are regarded as bringing new assets into the business and a profit results if there are in excess of the assets leaving the surplus income that remains after paying expenses and providing for that part of capital that has been consumed in producing revenue .

"It is the ultimate objectives of management to maximize profits over the long term consistent with its social responsibility (Gupta:1994).

Having summarized different definitions and views about profit, the general understanding can be put in the way that:-

- ) Profit is the figurative difference between revenue & expenses.
- ) Profit is the result of risk taking and uncertainty bearing.
- ) Profit provides the gauge measuring the success| efficiency of a business.
- ) Profit can be positive or negative. However, contractual profits are always positive.
- ) Profit arises due to the friction and imperfection in the market economy.
- ) Profit is as important to a firm as water to the fish.

### **Concept of Planning:-**

Planning means decision in advance before the actual work to be done in future. The dictionary meaning of planning is to decide about how to do something in future. Planning starts from forecasting and determination of future events. Planning opens the door for action. It is the method of thinking our acts and purpose beforehand. It is the first essences of management and all other function are performed within the framework of planning. Planning is the foundation of profit plans. "Planning is the conscious recognition of the study of present decisions(Chaudhary:1999).

Management planning and control begins with the establishment of fundamental objectives of the organization and continuous as the process by which necessary

resources are provided and employment effectively and efficiently towards the achievement of goals. Planning is essential to accomplished goals. It reduces uncertainty and provides direction to the employees by determining the course of action in advance.

Planning is management responsibility, not an accounting function. To plan is to decide and only the manager has authority to choose the direction the company is to take. According personnel are nevertheless deeply involved in the planning process

"The planning process, both short and long- term is the most crucial component of the whole system. It is the both foundation and the bond for the other elements because it is through the planning processes that we determine what we are going to do it. It operates as the brains center of an organization and like the brain it both reasons and communications

Management planning is a continuous process as opposed to a predict endeavor, since a planned projection can never be consider as the final and product. It must be revised as condition change and new information become available. "Management planning is a process that includes the following five phases(Munakarmi:2003).

1. Establishing enterprises objectives and goals.
2. Developing premises about the environment of the entity.
3. Making decisions about course of action.
4. Initialing activities necessary to translate plans into actions.
5. Evaluating performance feedback for replacing. It also provides the basic for performing the four other functions: Organizing, Staffing, Leading and controlling.

### **Planning vs. Forecasting:-**

Forecasting and planning are not the same meaning. Forecasting expected future conditions. This expectation depends up the some assumptions, which are very useful. Forecasting is our best thinking about what will happens to us in future. Planning can only do with forecasting.

Planning entails regular measurement of progress toward objectives and goals and the execution of strategic and action program. Yet it is clearly recognized that often have

to be altered in the light of new circumstances. It should be continuous process and not a once year experience. It should involve all these, whose jobs have a significant effect on the tames of the com

It is clear distinct from forecasting .Forecasting one of the essential elements of planning is a predications of what will happen on the basis of certain assumption, Planning is an attempt to determine what should happen and then to take steps that will make it likely to happen.

Forecasting is not a plan; rather it is statement and / or a quantified assessment of future condition about a particular subject based on one or more explicit assumptions. A forecasting should always state the assumption upon which it is based. A forecasting should be viewed as only one input into the development of the plan. The management of a company may accept, modify or reject the forecast. Planning incorporates management decisions that are based on the forecasting, other inputs, and management judgment about such related item as sales volume, prices, sales efforts, production, and financing. It is important to make a distinction between the forecast and plan. Plan primarily because the internal technical staff should not be expected or permitted to make the fundamental decision and judgments implicit every plan. Forecasting as only one step in planning is that forecasting is conditional.

Forecasting is the best tool to be used for proper planning when company policy and forecast have been formulates, planning can start. This means planning, the tactical to be used in achieving the objectives, should be based on forecasts and policy (Shrestha: 2005).

### **Types of Planning:**

Planning can be divided into Long Range, Medium Range and Short Range. The types of planning depend upon the time period covered by it.

### **Long Range Planning:-**

Long Range Planning usually covers a period of 5 to 10 years. The time period depends upon the size of the enterprises and nature of its activities. Long Range planning is one of the most difficult times span involved in planning as many

problems in short range planning can be traced to the absence of a clear sense of direction and the practice, which a comprehensive long-range plan provides. "Long Range planning is important basically for broad and long living enterprises. Long Range planning is closely concerned with the concept of the corporation as long living institution. Long - Range Planning is the continuous process of making present decisions systematically and, with the best possible knowledge to their futurity, organizing systematically the efforts needed to carry out these decisions and measuring the results of these decisions against the expectations through organized, systematic feedback.

Long - Range planning is a decision making process. The decision may be related about:

- ) Determination of goals, objective and strategies.
- ) The level of direction of capital expenditure.
- ) The accession of new sources of fund.
- ) Organization decision and structure etc.

According to George , the objectives of Long- Range planning are as follows:

- ) To provide a clear picture of whether the enterprises is handed.
- ) To keep enterprises strong.
- ) To focus in long- Range opportunities.
- ) To evaluate management personnel.
- ) To bring attention to new technique

### **Medium Range planning:-**

Medium Range Planning usually includes a time span to two or three years. The main purpose for using medium range planning is to establish interim objectives between long range and short range planning. In these cases, targets with specific results and define time schedules must be developed .Medium range planning after takes the form of budgeting in which each division, departments or unit is on forecast of demands, costs, financial position and completion with the time horizon of one or two years and critical decision on resources allocations.

Medium term planning most correctly predict the level of economic activity since that affect such factors as revenues profits, costs and expenditure. More detail is involved

in it than with short range plans but less than for long range plans; while resources allocation in important final approval will only be required for range and a consideration of alternatives is still possible.

### **Short Range Planning:-**

The short- range planning is synonymous with the classical budgeting period of one year. The short range planning is selected to conform to fiscal quarters or years. Because of the practice needed for confirming plans to accounting period and the somewhat arbitrary limitation of the long-range of three to five years is usually based as has been indicated on these prevailing beliefs that the degree of uncertainty over long period makes planning of questionable value.

### **Profit Planning and Control:-**

Profit Planning and Control is function of management rests upon some fundamental views that is conviction that a management can plan and control the long-range destiny of the manufacturing enterprises by making a continuing stream of well conceived decisions. The trust of the comprehensive profit making process especially for long-range success. The stream of managerial decision must generate plan and actions to support the planned outflow of the enterprises. So that realistic profit and return on investment are earned. Continuing generation of profit by managerial manipulation of the inflows and outflows provides the substance of profit and control." Profit planning is comprehensive statement for the operation of both short and long period. It is a plan of the firm's expectation and is used as a basis for measuring the actual performance of managers and their units. Profit plan has immense value in management. It helps in planning and coordinating if used appropriately, but not a replacement for management. Profit planning is a comprehensive and coordinated plan expressed in financial terms for the operations and resources of an enterprise for some specific period in the future (Munakarmi; 2003).

A profit planning and control program helps the management perform its planning function by developing a strategic (long-range) Profit plan and a tactical (Short-range) profit plan. Both of these plans include monetary expectations (i.e. goals) for assets, liabilities, profits and return on investment. The foundation of the strategic profit plan

(usually extending three, five or ten years into the future) includes the objectives, board goals, planning premises, and strategies of the enterprises as developed by the top management. The tactical profit plan can actually be viewed as the first years of the strategic profit plan. It is the detailed plan for the enterprises and for each of its responsibility centers.

A profit planning and control program helps management performance its control function by providing realistic goals and standards that are implemented and are then compared with actual results to measure performance. Under profit planning and control this performance measurement extends from top to the lowest organizational level in the enterprise

“Profit planning is a predetermined detailed plan of action developed and distributed as a guide to current operations and as a partial basis for the sub segment evaluation of performance. Thus, it can say that profit planning is tool, which may be used by the management in planning the future courses of actions and controlling the actual performance(Shrestha:2005).

The descriptive term comprehensive profit planning and control can be used in same context. Business budgeting, managerial budgeting and budgeting. The term comprehensive profit planning and control formalized approach for performing significant phases of management planning and control function specially it involves,

1. The development and application of the broad and long- range objectives.
2. The specification of enterprises goals.
3. A long range profit plan developed in broad terms.
4. A short-range profit plan detailed by assigned responsibilities by divisions, products and projects.
5. A system of periodic performance report by assigned by responsibilities and
6. Follow up procedures.

The International management institution conference on budgetary control held at Geneva (1930) has defined profit planning as "An exact and rigorous analysis of the past and the probable and desired future experience with a view to substituting considered intention for opportunism in management." Nell W. chamberlain describes in his research report "profit planning and control refers to the organization technique

and procedure where by long and short range plans are formulated, considered and approved, responsibility for execution on delegated. Flexibility to meet changing conditions is provided, progress in working the plan is reported, deviations in operation are analyzed and corrective action required to reach the desired objectives to taken. A profit plan is an advance decision of expected achievement based on the most efficient operating standards in effect or in prospect at the time it is established, again which accomplishment is regularly compared.

### **2.1.1 Fundamental of Profit Planning and Control**

Profit planning and control program is based on some fundamental, which are given bellows (Dangol: 2006).

#### **Managerial Involvement and Commitment:-**

Managerial involvement and commitment involve the managerial support, confidence participation and performance orientation. All level of management especially top - level management should engage itself to comprehensive profit planning and control successful;

1. Understand the nature and characteristic of profit planning and control.
2. Be convinced that this particular approach to managing is preferable for their situation.
3. Be willing to devote the effort required to make it operative.
4. Support the program in all its ramifications.
5. View the results of the planning process as performance commitments.

Managerial involvement on comprehensive profit planning and control program is directly related to the confidence of management and its known ability to influence the future program and convincement with the idea of setting goal in advance. Managerial involvement also deals with the idea of the direct participation of the lower staff on the program. But one should not forgot the fact that the ultimate decision should come from the tip level and the idea of protect own self should be totally controlled.

Modern concept of comprehensive profit planning and control program has emphasized on managerial involvement, due to the fact that modern budgeting

believes on "performance expectation" rather than on "fiscal expectation". Because modern business believes on the principle of attaining set objectives or goals rather than earning short run more profit.

### **Organizational Adoption:-**

A profit planning and control program must rest upon sound organizational structure for the enterprises and a clear-cut designation of lines of authorities and responsibilities. The purposes of organization structure and the assignment of authority are to establish a framework within which enterprise objectives may be attained in a coordinated and effective way on a continuing basis. The scope and interrelationship of the responsibilities of each individual manager are specified.

For easy and effective control sometime the organizational structure are divided into different functional sub-units, and each sub-unit chiefs are assigned with specific responsibility centers. Sometimes these responsibility centers are used to be in form of a division or department or a sales district. However, in most of the cases these centers are used to be a functional area like:

a) Cost Center:

It is only responsible for controllable costs incurred in the sub-unit but not responsible for profit or investment.

b) It is responsible centers for cost and revenue and hence profit.

c) Investment Center is responsible for cost revenue profit and amount of investment invested on assets.

Based upon the set organizational structure the annual plan and program prepared. The activities are:

a) Top - level management should furnish the information about the objectives, planning assumption to the managers of all functional sub - units.

b) Based upon the information furnished to them each sub unit prepares the annual plan followed by sales and production plan.

c) After reviewing and evaluating the plans submitted by the sub-unit, higher management prepare master plan for the enterprises as a whole which will known as profit plan or master plan.

### **Responsibility Accounting:-**

Planning is done with the help of the historical data supplied by accounting section and comparing actual data with projected or planned data does control. So, for this reason accounting system of any enterprise should be build around the responsibility structure of organization or around functional sub-units. This is called responsibility accounting. For responsibility accounting system one should have to define responsible of the various division, then the relevant parameters of the cost, revenue and other financial data should be utilize for the preparing plan.

At its origin, cost accounting was giving emphasis only on costing of goods produced. But nowadays situation has changed and it is given more emphasis on cost planning then only to costing. This changed in priority is based upon the responsibility accounting and principle of product cost has been given secondary importance. At first cost data generated from historical cost accounting are used for cost planning and control purpose then the same cost data used for costing purpose.

If the parameter of cost and revenue used for planning purpose are not used in accounting system or are not used for costing purpose, valuation of the result by comparing it with planned goal will not be effective. So, for evaluation purpose and for accounting purpose each of the responsibility center have prepare chart accounting parameters to be used for planning purposes and have to supply it with full instruction to respective unit then only the main objectives of the responsibility accounting can be fulfilled.

### **Full Communication:-**

Communication can be broadly defined an interchange of thought or information to bring about a mutual understanding between two or more parties. It may be accomplished by a combination of words, symbols, message and subtleties of understanding that come from working together, day in and day out, by two or more individuals.

Communication is needed for both the feed forward and feed backward process, which are most important for operation any organization. Role of communication can

be justified in all aspect of management. It is needed either for decision making or for supervision or for evaluation. Flows of information must be adequate in all side.

For comprehensive profit planning and control, effective communication means development of well defined objective, specification of goals, development of profit plans and reporting and follows up activities related to performance evaluation for each responsibility center. To have effective communication for comprehensive profit planning and control, both are the parties related with the planning activities must have some understanding responsibilities and goals, full participation in all matter, well-defined downward flow of information and well-defined reporting system is needed.

### **Realistic Expectation:-**

Profit planning and control must be based upon realistic approach or estimation. Management must be realistic assumption and must not take either irrational optimism or unnecessary conservation. Perfection on setting goal or objectives of the future sales, production levels, costs and capital expenditure cash flow and so on determine the success of profit panning and control purpose, a realistic approach reared with the dimension and external internal environment that will during the time span should be considered. This is called expectation.

### **Time Dimensions:-**

Whether an individual or and entity remains idea or busy, time passes at the same rate. The problem of the manager in one hand is to accomplish the planned activities in a given time and on the other hand is to prepare the plan itself. For effective implementation of planning, management of the enterprise must establish a define time dimensions for certain types of activities. Other word for each activities related with planning would be given definite time for implementation, followed by other activities. This called planning activities. In the view point of time dimension a manager should maintain clear - cut distinction between historical consideration and futuristic consideration. Timing of planning activities suggests that there should be a definite management time schedule established for initiating and completing certain phases of planning process. Planning horizon is the time for which the planning done

or we can call it life span of the plan. For every enterprises there used to be many planning horizons to maintain the continuity of planning activities.

In conclusion, we can say that for comprehensive profit planning and control, purpose planning activities and implement must be careful to accomplish the activities in time.

**Flexible Application:-**

Rigidity of any comprehensive profit planning and control program is strictly undesirable because the managerial use of different implications. Unless budget which imposes rigidity on any activity and puts constraint on the decision making freedom of managers, profit planning and control program permits freedom to all managers. This is possible in profit planning because in the course of preparation profit planning and control all level of managers are involved and hence the top management will have privilege to make necessary decision and delegate, the power of making favorable decision. In such a situation the profit plan management in the position of being able to assess, on more objectives basis, the soundness of contemplated decision. To cost control also, the principle of flexibility is especially important. Expenses and cost budget must not be rigid in nature. Budget should not prevent any of the units to make rational decision and to take opportunity benefits merely on the ground that such expenses are not anticipated. Finally it can be said that for profit planning and control purposed budget should not be regarded as straight jacket and for management purpose the profit planning and control approach should not be regarded as the constraint for the management to seize the opportunities, which is going to be most beneficial for enterprises in long run.

**Timeless:-**

Whether an individual or an entity remains idle or busy, time passes at the same rate. The problem of the manager in one hand is to accomplish the planned activities in a given time and on the other hand is to prepare the plan itself. Phasing of the planning is of two types: one is (a) timing of planning horizons and b) timing of planning activities.

Planning horizons is the time for which the planning is done or we can call it life span of the plan. For any enterprise there use to be many planning horizons to maintain the

continuity of planning activities. The decision made by the manager for future activities reflects the managerial planning. In other words, managerial decision, which reflects planning activities, always effects on future activities only. It does not have any effects on present or past. Major decision should be made based on adequate supporting study, analysis, evaluation, and consolation.

For effective implementation of planning, management of an enterprise must establish a definite time dimension types of activities. This is called planning activities.

From the view of point of time dimension a manager should maintain clear- cut distinction between historical and future consideration. Because the result derived from historical activities should be considered as platform for deciding plan.

### **Behavioral View Point:-**

Behavioral aspect of human going is the field of study of the psychologist, educator and businessperson and finding was that there could be so many unknown misconceptions and speculation, which have to be considered for efficient management. A goal and dynamic leadership can resolve these problems by integrating all the groups' efforts for betterment of the organization. These facts also have been well considered under comprehensive profit planning and control approach and focuses has been given to resolve the behavioral problems.

Goal orientation is the characteristics of ambitious and competent individuals who are normally involved in management process. Goal, which has been identified for an individual can enhance such persons to intensify their performance. To motivate men there should be a good harmony between their personal interest and organizational interest and goal have to be identified accordingly. More than monetary benefits personal satisfaction from the works counts a lot for the competent people. So, it will be much more fruitful for an enterprise to pursue all the people to formulate the plan and to set goals and policies before asking them to implement it. Finding of relevant study conducted by industrial psychologist has described about the effects of pressure on the human behavioral. Pressure unto moderate limit is needed to pursuer the working staff to work but excess pressure will have negative effects. The comprehensive profit planning and control approach has been developed on this principle.

Another aspect of behavioral recognition is that the individual recognition of the work should be carefully done. The system of recognition the efficient work if an individual manager and identification of an efficient manager should be done and efficient one should be rewarded. Due to lack of understanding between the working group of the program and its operation, effects of program on them and expectation of over pressure and disagreement with planning and control approach are the cause of management failure. But a careful management has to tackle this problem very carefully and have to direct the attention of the workers in positive way.

**Follow up:-**

"This fundamental holds that both good and substandard performance should be carefully investigated, the purpose being three fold: (1) in the case of substandard performance, to lend in a constructive manner to immediate corrective action (2) in case of outstanding performance to recognize it and perhaps provide for a transfer of knowledge to similar operations and (3) to provide a basis for better planning and control in the future'.

**2.1.2 Managerial Evaluation of Alternatives in Planning**

Managerial planning always includes the analysis of the alternatives courses of action, which leads to a proposed destination. The comprehensive profit planning and control approach is especially useful in the selection and evaluation of the alternatives to overcome the financial problem encountered by the enterprises. The tactical short range and strategic long-range profit plan. Some times constitute many similar model, which can be utilized for evaluation of the efforts of enterprises. In the process of profit plan construction the use of procedures such as decision models process of profit plan construction the use of procedures such as decision models income summaries, cash flows analysis, break even analysis and return on investment analysis and provides clerical information for assessing the impact of different alternatives.

The provisional choice made for profit planning should be with the financial objectives of the firm. Management should always try to tentative plan till the approved of actual profit plan. The tactical and strategic plan built up involves the drafting, evaluating, redrafting and approved of plan itself and sometimes it takes long term also. Therefore, for period of such process, management has to adopt some

alternatives methods for organizational operations and after the approval of the actual profit(Pandey:1983).

### **2.1.3 Profit Planning and Control Process**

The profit planning process should involve periodic considered and in depth preplanning. So, that all aspects of operations are carefully re-examined and reevaluated. This prevents a budget planning approach that involves only justification of increases over the prior period. The concept of re-evaluation and the necessity to justify all aspects of the plans periodically find its strongest support in what has been called "Zero base budgeting"(Pandey1995).

#### **Identification and Evaluation of External Variables:-**

"The Variable identification phase of profit planning process focuses identification and evaluating the effect of the involve separate consideration of variable that are not controllable. This means that management planning must focus on how to manipulated two controllable variables and non-controllable variables. Relevant variables mean those that will have direct and significant implication the enterprise. A particular phase of this analysis includes an evaluation of the present strength and weakness of the enterprises.

Planning must be necessarily start with on objectives and realistic understanding of the present status products services, markets, profits and return on investment cash flow, availability of capital productive capabilities and the competence of both management and non management personnel. This aspect of the planning process is usually difficult for most management because deficiencies and inefficiencies are frequently difficult to identify and evaluate objectively by those directly involved.

#### **Development and Evaluation of Company Strategies:-**

Company strategies are the basic trusts, ways and tactics that will be used to attain planned objectives and goals. A particular strategy may be short-term. Here are some actual examples of basic strategies:

- a) Increase long- term market penetration by using technology to develop new products and improve current products.

- b) Emphasize product quality and price for the "top" of the market.
- c) Market with low price to expand volume (units)
- d) Use both institutional and local advertising programs to build market share.
- e) Improve employee morale and productivity by initiating a behaviors management program.

**Executive Management Planning Instructions:-**

"This phase involves communication of the subjective plan to middle and lower management levels. It explains the broad objectives, enterprises goals, enterprise strategic and any other executive management instructions needed to develop the strategic and tactical profit plans. It is also called the statement of planning premises or the statement of planning guidelines"

**Preparation Plans:-**

"Encompass such item plans for improvement of present products, new and expanded physical facility, entrance into new industries, exists from products and industries, new technology and other major activities that can be separately identified for planning purposes. The nature of project is such that they must be planned as separate units. In planning for a project, the time span considered must normally be anticipated life span of the project. Management should encourage on a continuing basis project proposals from any source within the enterprise. Consistent with this approach, during the formal planning cycle, Management evaluates and decides upon the plan status of each project in process and selects any new project to be initiated during time dimensions covered by the upcoming strategic and tactical profit plans. However preparation and evaluations of current and future project plans are essential on a format basis as one of the profit planning phases.

**Development and Approval of Strategic and Tactical Profit Plan:-**

When the managers of the various responsibility centers in the enterprises receive the executive planning institutions and the project plans, they can begin intensive activities to develop their respective strategic and tactical profit plan. The strategic long-range plan and the tactical short-range plan are usually developed concurrently. It is possible (and not infrequent) that executive management, the financial executive

will develop the strategic and tactical profit plans. This approach is advisable because it denies full participation in the planning process by middle managers. Lack of participation can cause unfavorable behavioral effects”.

#### **Implementation of Profit Plans:-**

"Implementation of management plans that have been developed and approved in the planning process involves the management function of leading subordinates in attaining enterprise objectives and goals. Thus effective management at all levels requires that enterprise objectives, goals, strategies and policies be communicated and understood by subordinates. There are many facts involved in management leadership. However, a comprehensive profit planning and control program may aid substantially in performing this function. Plans, strategies and policies developed through significant participation establish the foundation for effective communication. The plans should have been developed with the managerial conviction that they are going to be met or exceeded in all major respects. If these principles are effective in the development process, the various executive and supervisors will have a clear understanding of their responsibility and expected level of performance."

#### **Use of periodic Performance Reports:-**

"As profit plans implemented during period of time specified in the tactical plan, periodic performance reports are needed. These performance reports are prepared by the accounting department on a monthly basis. Also, some special performance reports are prepared more often on an "as needed" basis. These performance reports a) compare actual performance with planned performance and b) show each difference as a favorable performance variation.

A clear distinction must be made between external and internal financial reports. Internal reports can be further classified as a) statistical report that gives the basic qualitative internal statistics about the operations of the enterprise (b) specially managerial reports about nonrecurring and special problems and (c) periodic performance reports. The latter report focus on dynamic and continuous control tailored to the assigned managerial responsibilities.

### **The Flexible Expenses Budgets:-**

The flexible expenses budget is also referred to as the variable budget sliding scale budget; expenses control budget and formula budget. The flexible budget concept applies only to expenses. It is completely separate from the profit plan, but it is used to complement it. Many companies do not use flexible budget procedures. Other companies integrate profit planning and flexible budget procedure.

Flexible budgets give realistic information about expenses that make it possible to compute budget amounts for various output volume or rates of activity in each responsibility center. To do this the flexible budget provides a formula for each expense in each responsibility center. The formula gives the relationship of each expense to output (volume of work) in the center. Each formula includes a constant expenses rate.

In the case of fixed expense, the variable rate is zero. In case of variable expenses, the constant factor is zero and in the case of semi variable expenses, there is value for both the constant factor and the variable rate. To apply the concept in a department, then each expense must be classified into one of three categories.

1. Fixed expenses: Those that remains essentially constant in the short run, regardless changes in output or volume of activity.
2. Variable expenses: Those that vary directly (in production) with changes in output.
3. Semi variable expenses: Those that are neither fixed nor variable but have both a fixed and a variable component.

### **Implementation of Follow-Up:-**

"Follow- Up is an important part of effective control. Because performance reports are based on assigned responsibilities, they are the basis for effective follow up actions. It is important to distinguish between cause and effect. The performance variations are effects (the results); the management must determine the underlying causes. The identification of causes is primarily a responsibility of line management. Analysis to determine the underlying causes of both favorable and unfavorable performance variances should be given immediate priority. In the case of unfavorable performance variances, after identifying the basic causes, as opposed to the results, an

alternative for corrective action must be selected. Then the corrective action must be implemented".

#### **2.1.4 The Profit Planning and Control Manual**

1. A statement of objectives so the profit planning and control program.
2. Procedure to be followed in developing profit plan.
  - a) Instructions and forms to be used.
  - b) Procedures for making planning decisions.
3. A profit planning and control that specifies completion dates for each part profit plan and for the submission of reports.
4. Distribution instruments for profit plan schedules.
5. Instruction and procedure for preparation of reports.
  - a) Responsibility and procedure for performance or reports.
  - b) Form content and procedure of performance reports.
  - c) Distribution instruction for performance reports.
6. Procedure for taking corrective action on variance:
  - a) Unfavorable variance
  - b) Favorable variance
7. Follow up and re- planning procedures. (Welsch Glenn )

#### **2.1.5 Line and Staff Responsibilities Related to Profit Planning and Control**

"The chief executive now ultimate responsibility for profit planning and control. However, there must be a concomitant assignment of responsibilities to line and staff executives. Each line executive must be assigned responsibility for (1) operational decision inputs to the plan (2) Implementation and (3) control. The profit planning and control program must be established upon a firm foundation of line responsibility and commitment to develop implement and attain the role of even center in the enterprises objectives and goals. We can not overemphasize that a profit planning and control program should be viewed as an approach to assist managers in line positions in carrying out their basic responsibilities they should viewed the plan as their own and they must assume full responsibility for attaining them.

In contrast, the staff responsibilities for a profit planning and control program include:

- 1) Designing and improving the system.
- 2) Supervising and co-ordination the operation of the system.
- 3) Providing expert technical assistance, analysis and advice the line managers and
- 4) Developing and distributing performance

The chief financial officer should be assigned overall staff responsibility for the profit planning and control program. Normally the financial function included a budget director or director planning and control, who should be assigned the staff supervisory responsibility. In view of the importance of an effective profit planning and control program the position of the individual responsible for the program should be such that it will command attention and respect through out the firm.

#### **2.1.6 Purpose of Profit Planning and Control:-**

A comprehensive profit planning and control is a systematic and formularized approach for stating and communicating the firm's exception and accomplishing management in such a way to maximize the use of a profit plan is to achieve the maximum benefit from the resources available to an organization ever a particular span of time. It serves as a tool for management control. The maximum objectives of profit planning and control the operations of the enterprise. In fact, it is best sources of communication an important tools in the hands of management. The purpose of budgeting or profit planning and control may be summarized as follows;

1. To state the firms expectation in clearly formal terms to avoid confusion and facilities attainability.
2. To communicate expectation to all concerned with the management of the firm so that they are understood supported an implemented.
3. To provide a detailed plan of action for reducing uncertainty and for the proper decision of individual and group efforts to achieve goals.
4. To coordinate the activities and efforts in such a way that use of resources is maximized.
5. To provide a means of measuring and controlling the performance or individuals and units and to supply information on the basis of which the corrective action can be taken.

### **2.1.7 Foundation of PPC**

There are certain steps that an enterprise should take to establish a sound foundation for initiating the profit planning and control. These steps can be summarized as follows;

- 1) Commitment by top management there must be commitment by the top management to the broad concept of profit planning and control sophisticated understanding of implication.
- 2) The characteristics of the firms and the environment in which its operation must be identified and evaluated so that readymade decision can be made concerning the characteristics of profit planning and control program.
- 3) There should be an evaluation of the organization structure and assignment of managerial responsibilities and implementation of charges considered necessary for planning and control purpose.
- 4) There must be an evaluation and re-organization of accounting system and where desirable to assume that it is tailored to the organizational responsibilities (responsibility accounting). So that it provide historical data particularly useful for planning and control.
- 5) The policy determination must be made in respect to the time dimension to be used for profit planning and control.
- 6) A program of budget education must be developed which should emphasize the purpose of the program. The manner in which it will operate including certain policies and guidelines necessary for its administration. The responsibility of each level of management in the program and the ways by which program can be facilitate the performance.

### **2.1.8 Advantage and Disadvantage of Profit Planning and Control**

Profit planning and control is one of the most important scientific tools that determine the whole life of the business. It is a newly developed tool in the modern business house. If a enterprise adopted PPC scientifically, it automatically earns profit where as if a enterprises does not adopt PPC in scientific manner, there will occur a loss. So it should be applied a systematic way.

Some people say that comprehensive profit planning and control is applicable to the large and complex organization only but it is not so. It is applicable to all enterprises whether it is large sized business or not. Similarly, it is applicable to all types of organization whether it is manufacturing or not, service or not.

**Merits:-**

- I. It forces early consideration of basic policies.
- II. It requires adequate and sound organization structure that is there must be a definite assignment of responsibility for each function of the enterprise.
- III. It compels all member of responsibility for each function from the top down for participate in the establishment of goals and plan.
- IV. It pinpoints efficiency and inefficiency.
- V. It frees executives from many day to day internal problems through predetermined policies and clear-cut authority relationship. It thereby provides more executives time for planning and creative thinking.
- VI. It tends to remove the cloud of uncertainty that exists in many organizations, especially among lower levels of management, relative to basic policies and enterprise objectives.

**Demerits:-**

- I. It is difficult, if not impossible, to estimate revenues and expenses in our company realistically.
- II. Our management has no interest in all the estimates and schedules.
- III. It is not realistic to write out and distribute our goals, policies, especially to revise budgets constantly. Too much work is required.
- IV. It takes away management flexibility.
- V. It creates all kinds of behavioral problems.
- VI. It places the management in a straitjacket.

**2.1.9 Sales Budget or Plan**

**Meaning:-**

The sales budget is the starting point of comprehensive budgeting. Profit plan starts with preparation of sales budget and rest of other budgets will be prepared in the basis of sales budget. “Sales plan is the starting point in the preparation of the comprehensive profit planning and control. All other plans and budgets are depending

on the sales budget. The budget is usually presented both in units and dollars of the sales revenue or sales volume. The preparation of sales plans is based on the sales forecast. A variety of methods is used to forecast the sales for the planning period"

Sales planning are the foundation of all other budgets. It is the most important but difficult to prepare. Sales plan provides basic management decisions about marketing. Marketing decisions are basic approaches for developing a comprehensive sales plan. Since, the sales planning process is a necessary part of profit planning and control.

A sales plan should be realistic. If it is not realistic, most other parts of the overall profit plan also are not realistic. Therefore, management develops a realistic sales plan. If management can not develop a realistic sales plan, it will be little justified

The Sales plans have three distinct parts:

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

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

- a) The income that will be earned from sales.
- b) The costs and expenses of making these sales.
- c) The sales surplus. The income from sales depends on the quantity and the price of the goods, which will be sold (Hal shall: 1974 ).

In the development of profit plan the process starts from sales budget. "Sales budget in one of the functional or operating budget and in especially forecast of sales to be effected in a budget period. In fact sales budget defines the quantities and values of expected sales in a total as well as product wise and area during a define future period. Sales budget forms the fundamental basis for other functional budgets and it is needed to co-ordinate the production function with expected demand for a particular product. The preparation of sales budget requires forecast of quantities to be sold and also the standards price sold." The purpose of a comprehensive sales plan is as follows.

1. To reduce uncertainty about future revenue.
2. To incorporate management judgment and decisions.

3. To facilitate management control of sales activities.
4. To provide necessary information for developing other elements.

#### **Components of Comprehensive Sales Plan:-**

1. Management policies and assumptions.
2. Marketing plan (sales and service revenue)
3. Advertising and promotion plan.
4. Distribution (selling) expenses plan.

#### **Sales Planning and Forecasting:-**

Sales planning and forecasting often are confused. Although related, they have distinctly different purposes. A forecast is not a plan, it is a statement and / or a quantified assessment of future conditions about a particular subject based on one or more explicit assumptions. A forecast should always state the assumptions upon which it is based. A forecast should be viewed as only one input into the development of a sales plan. The management of a company may accept, modify or reject a forecast. In contrast, a sales plan incorporates management decisions that are based on the forecast, other inputs, and management judgments about such related items as sales volume, price, sales efforts, production and financing.

A sales forecast is converted to a sales plan when management has brought to bear management judgment, planned strategies, commitments of resources and managerial commitment to aggressive actions to attain the sales goals. In contrast, sales forecasting is a technical staff function.

It is important to make a distinction between the sales forecast and the sales plan primarily because the internal technical staff should not expect or be permitted to make the fundamental management decisions and judgments implicit in every sales plan. Moreover, the influence of management actions on sales potentials is difficult to quantify for sales forecasting. Therefore, the elements of management experience and judgment must mold the sales plan. Another reason for identifying sales forecasting as only one step in sales planning is that sales forecasts are conditional. They normally must be prepared prior to management decisions or plans in such areas as plant expansion, price changes, promotional programs, production scheduling, expansion or contraction of marketing activities, and other resource commitments. The initial

forecast and there should usually be more than one to indicate probable sales under various alternative assumptions are an important source of information in the development of managerial strategies and resources commitments.

One author emphasized the confusion between forecasting and planning as follows:

When the leader of an organization says that he would like a forecast, what he often means that he wants a plan. He wants to make something happen, and he uses this plan as a target for people in his organization.

### **Long Range and Short Range Sales Plan:-**

In harmony with a comprehensive profit plan, both strategic long - term and tactical short- term sales plan must be developed. Thus, the usual case is a five or ten- year strategic sales plan and a one year tactical sales plan. Many sales and product decisions commit a large amount of resources involving a life span of many years. Basic strategies and major decisions that involve commitments of resources and long life spans are difficult to stop. Sometimes it may be helpful to view the development of the long- range and short- range sales plan as separate. However, they must be integrated because the short - range sales plan should dovetail with strategic long - range plan in all major respects.

**1. Long Range Sales Plan:** It is known as strategic sales plan. Long term sales plan uses board grouping of products (product line) with separate consideration of major and new products and services. Long - term sales plans usually involve in depth analysis of future market potentials, which may be build up from a basis foundation such as population changes, state of the economy, industry productions, and finally company objectives. Long-term managerial strategies would affect such area as long-term pricing policy, development of new products and innovations of present products, new directions in marketing efforts, expansion or changes in distribution changes, and cost patterns. The influence of managerial strategy decisions is explicitly brought to bear on the long- term sales plan primarily on a judgmental basis.

**2. Short Range Sales Plan:** It is also called tactical sales plan. A common approach used for short time horizons in a company is to plan sales for twelve months into the future, dealing the plan initially by quarters any buy months for the first quarter. At

the end of each month or quarter throughout the year, the sales plan is resulted and revised by adding a period in the future and by dropping the period just ended. Thus, tactical sales plan are usually subject to review and revision on a quarterly basis. The short-term sales plan includes a detailed plan for each major product and for groupings units (or jobs) and in sales and /or service dollars. Short -term sales plans must also be structured by making responsibility (e.g. by sales districts) for planning and control. However, managerial judgment plays a large part in their determination (Welsch:2000).

The amount of detail in a tactical sales plan is a function of the company's environment and characteristics. A short-range sales plan should include considerable detail, whereas a long-range plan should be in broad terms. To establish policy about detail in the short-term sales plan, the main question is use of the results. The amount of detail depends on,

- 1) To provide detail by responsibility for planning and control purposes.
- 2) The short-range sales plan must provide detail needed for completing the profits plan components by other functional managers.
- 3) The type of industry, size of the firm, availability of resources and use of the results by management.

### **Development of the Comprehensive Sales Plan:-**

There may involve many steps in development of sales plan some specifies steps are given below:

#### **a. Develop management guidelines for sales planning:**

The guidelines should be prepared for management in the sales planning. There guidelines should specify sales planning responsibilities. These guidelines help for co-ordination and uniformity in sales planning process.

The guidelines should emphasize enterprise objectives goals and sales strategy. It also includes general pricing policies, major market thrust, marketing strategies and competitive positions.

b) Prepare sales forecasts:

One or more sales should be prepared. Each separate forecast use different assumption, which should be clearly explained in the forecast. The forecast should include strategic and tactical forecast that are consistent with the time dimensions used in comprehensive profit plan.

c) Assemble other relevant data:

The information, which is sales planning, should be collected and evaluated. Those information are as follows.1) Manufacturing capacity (2) source of raw material suppliers or goods (3) Availability of key people and labor force (4) Capital availability (5) Availability of alternative distribution channels.

d) Development of the strategies and tactical sales plans:

Using the information provides step 1, 2 and 3, the management develops a comprehensive sales plan. A comprehensive sales plan has generally two dimensions.

a) Strategic sales plan and b) Tactical sales plan.

e. Secure Managerial commitment attains the goals in the comprehensive sales plan:

To management must be fully committed to attaining the sales goals that are specified in the approved sales plan. The commitment to the top sales managers of the goals approved marketing plan and strategies by responsibilities. The commitment must be strong and ever present in day- to-day operations.

### **Evaluation and Consideration of Alternatives;-**

Developing a realistic sales plan involve consideration of various policies and related alternative and final choice by executive among many possible courses of action. There is major commonly used consideration as follows while preparing the sales plan.

a) Price - cost- volume consideration in planning:

Price - cost-volume consideration play role to prepare sales planning. Price and sales volume are mutually interdependent in a competitive market. Sales volume and price are closely related that a complicated problem to the

management of any enterprises. Sales and price two related basic relationship involving the sales plan must be considered.

- i. Estimation of demand of curve i.e. the extent to which sales volume varies at different offering prices.
  - ii. The unit curve, which varies with the level of production output.
- b) Product- Line Consideration in Sales Planning:

The determination of the number and types of products that company will plan to sell is crucial in the development of sales plan. The strategic and tactical sale plan must include tentative decision about new product lines to be introduces, old product lines to be developed, innovation and product mix.

**The following Factors should be considered while preparing sales plan:-**

1. General economic conditions.
2. Sales trends of specific product.
3. Anticipated results of advertising and promotional campaigns.
4. Effect of proposed price changes.
5. Entrance of competitor in market
6. shifting a market
7. Introduction of new, improved, substitute products by company or its competitors.
8. Company's productive capacity.
9. Government rules and regulations etc.

**2.1.10 Production Budget**

**Meaning:-**

Production plan formulate after preparing of sales plan in comprehensive profit planning. The production plan involves the determining of the number of units of each product that must be manufactured to meet planned sale and maintain the planned inventory level of finished goods. It is estimate of how cheaply the goods required by sales can be made.

Once sales and inventory requirements have been established, the logical first step in the production plan is a facility survey. This survey should determine that all planned products can be produced on existing or contemplated, and that they can be made in

the volumes required. In this initial stage, availability of labor supply and skill are considered. Bottlenecks caused by lack of skill or equipments are frequently uncovered .At this point, decision must be made either to either to eliminate bottlenecks or to reduce planned volume.

Production budget is based on estimated sales, production must be planned to allow sufficient time to manufacture the product before the estimated date of sale. The annual sales budget and the inventory requirements provide the framework for the production budget. It is based on:

- a) Sales budget.
- b) Plant capacity
- c) Opening inventory of finished goods.
- d) Required closing of inventory of finished goods and
- e) Policy of the management.

Production budget is divided into monthly budget for the purpose of production planning. In production panning the following factors are considered:

- a) Economy batch quantity
- b) Delivery schedules
- c) Seasonal conditions
- d) Optimum utilization of labor without much over time and idle time
- e) Reduction of bottlenecks such as shortage of man, material etc.
- f) Stock requirements
- g) Work in process

In developing a comprehensive profit plan, the requirement of sales plan must be converted to production manufacturing requirement. The production plan entails the development of policies about efficient production levels, use of production facilities and inventory levels. The quantities specified in the marketing plan adjusted to confirm the production and inventory policies give the volume of goods that must be manufactured by product and by interim time. Thus, the equation of production requirement will be:

$$\text{Production} = \text{Sales Volume} + \text{change in inventory of finished goods}$$

A complete production plan should show budgeted data classified by:

- a) product to be manufactured
- b) Interim time period and
- c) Activities of each responsibility center in the manufacturing process.

Production managers are responsible for preparing the production budget. He prepares the production program based on the sales plan and this production plan should be consistent with managerial policies such as inventory levels, stability of production, capital addition and so on(Bajracharya et.al;2004).

#### **Area of Production Planning:-**

The area of production planning can be explained as follows.

- 1) Direct Market Sales: when the production is based on only with market demand, the production process starts after the demand of goods. In case of job or, unit production, system production budget is not necessary. The quantity produced is always equal to the quantity sold.
- 2) For Inventory: When the nature of product is scarce, firm can manufacture goods in full capacity. In other words, when demand is higher than supply, the firm can produce goods as much as possible. Therefore, production budget is not necessary.
- 3) For sale and Inventory: Production budget is important when goods are produced for either selling or storing purposes. In this case, budgeted sales and inventory affects the production volume of the firm. Therefore, the objective of the production should be clear.

#### **Objectives of Production Budget or Plan:-**

The objectives of production budget as follows:

- a. To bring common focus all the factors necessary to establish policies and to determine operations.
- b. To project these established policies into the future by an analysis of past performance.
- c. To plan and control the operations being carried out to implement policies decided upon.

- d. To coordinate the various aspects of factory operation as to make them a vital link in the chain of profitable program.
- e. To plan the sequences of operation required for economical production.

### **Procedure of Production Budget:-**

"A production budget is a quantity budget which lays down the quantity of units to be produced during the budget period. It specifies the planned quantity of goods to be manufactured during the budget period. The main purpose of this budget is to maintain an optimum balance between sales, production and inventory position of the firm. For developing a production budget, the following steps should be followed.

Step 1. To establish policies for inventory levels.

Step 2. To determine the total quantity of each product to be manufactured, within budgeted period.

Step 3. To schedule this production by interim period

After completing the production plan it should be sent to the executives committee for evaluation. Then it should be given to present for tentative approval prior to its use as a basis for developing the direct material, direct factory overhead budgets.

### **Developing the production Plan:-**

The development of production plan involves the following steps:

1. Recasting of sales budget
2. Production analysis
3. Scheduling
4. Dispatching
5. Inspection

But there are three basic steps to be followed while developing a production plan.

- a) Establishing policies for inventory levels.
- b) Planning the total quantity of each product that is to be manufacturing during the budget period.
- C) Scheduling this production by interim period.

Symbolically, the following formulate can be used to be determined the planned production.

Requirement of sales (in unit)	.....
Add: Desired ending inventory of finished goods	.....
Total required production for the year	..... -----
Less: Opening inventory of finished goods	.....
Planned production for the year	..... -----

**Setting inventory Polices:-**

To develop production requirement, consideration must be given to the finished goods and work-in - process inventories. It is impossible to develop a realistic production plan without definite inventory policy. The objectives of inventory policy should be:

- ) To plan the optimum level of inventory investment and
- ) To realistically maintain these optimal levels through proper control

But in most business, inventories represent a relatively high investment and have a significant impact on the major functions of the enterprises and its profit. Inventory levels should be maintained between two extremes: an excessive level causing excessive carrying costs, risks and investment and an inadequate level meet sales and production demands promptly. An important consideration when planning and controlling inventories is that they most absorb difference in stock between sales volume and production levels.

The establishment of inventory standard, such as maximum and minimum levels or target turnover rates and the application of techniques and methods that will ensure conformity will planned inventory standards are should include in inventory policies. Budgeting requires the inventory policies be established and provides for reporting variance of actual inventory levels from standards from month to month.

**2.1.11 Material Budget or Plan**

**Meaning:-**

The Material plan developed in comprehensive profit planning and control after the production budget gives information about the units to be produced and on this basis the raw material need in estimated. The quantity of each material to use is determined on the based of production budget. Production budget also determined the material

usage leads to the situation of the problem of when and how much to purchase of each material. A comprehensive profit planning and control program includes planning and controlling an adequate control and coordination should be planned and controlled in between.

- a) Factory requirements for raw materials
- b) Raw materials inventory levels and
- c) Purchase of raw materials.

To assure that right amount of raw material and parts will be on hand at the required time and to plan for the cost of such materials and parts. it is essential that the tactical short term profit plan should include :

- a) A detailed budget specifying quantity and cost of such materials and parts required and
- b) A related budget for raw material purchases

The planning of raw material usually requires for the following four budgets;

- I) Materials and Parts Budget
- ii) Materials and parts purchase Budget
- iii) Material and Parts inventory Budget
- iv) Cost of Material used Budget.

### **Material parts Budget:-**

Materials and parts budget specifies the planned quantities of each raw materials and parts required for planned production. It should specify quantities of each raw material and parts by time, product and responsibility center.

Materials used in a factory are traditionally classified as direct and indirect. Parts are usually classified only as direct. Direct material is generally defined to include all materials and parts that are an integral part of the finished product and can be directly identified with the unit costs of the finished products. Thus preparation of direct materials and parts budget requires a carefully study of the product to determined by the planned number of unit usage rate. The planned number of unit of finished goods to be produced to compute the total units of materials and parts required the unit usage rates.

The materials budget includes only the quantities (not cost) of direct material, factory suppliers, and indirect materials that are included in the manufacturing or factory overhead budget. The budget quantities of each raw materials and part needed for each finished product must be specified in the material and parts by interim periods (months and quarter) and by responsibility centers. The manufacturing manager should be responsible for developing the data included in the materials and parts budget

The basic inputs required to develop the direct material and parts budget are:

- i) Volume of output planned and
- ii) Standard usage rate by type of raw materials and part for each finished product.

The unit usage rates can be derived

- i) during initial development of the products.
- ii) From engineering studies.
- iii) From past consumption records and bills of materials.

### **Material and Parts Purchase Budget:-**

The purchase budget specifies the quantity of materials and part to be purchased, timing of the purchase and the estimated cost of the materials and parts purchase. Therefore, the purchase budget differs from the materials and parts into prime two ways. One is the budget usually especially different quantities of material and parts. This difference in quantities results from the planned changes in materials and parts inventory level. Other, the materials and parts budget specifies only quantities, whereas the purchase budget both quantities and costs. The purchase budget is directly with the timing of actually receipt of materials and parts rather than with timing of purchase order or usage. The purchasing manager must order materials and parts so that the delivery dates will correspond to the materials and parts level and usage requirements in the production process. Therefore, he should be assigned the direct responsibility for preparing a detailed plan of purchase. Carefully planning of purchase can result in significant cost saving in much enterprise.

### **Material and Parts Inventory Budget:-**

Material and parts inventory budget specifies the planned level of materials and parts inventory in term of quantity and cost. The difference in term of quantity between the

requirements as specified in materials and parts budget and the purchase budget is shown as planned increases or decrease in material and parts inventory budget.

The primary considerations in setting inventory policies for materials and parts are:

- ) Timing and quantity of manufacturing needs.
- ) Economic in purchasing through quantity discounts
- ) Availability of materials and parts
- ) Lead time ( order and Delivery)
- ) Perish ability of materials and parts
- ) Storage facilities needed.
- ) Capital requirements to finance inventory
- ) Cost of storage.
- ) Expected change in the cost of materials in parts.
- ) Protection against shortage.
- ) Risk involved in inventories.
- ) Opportunity cost ( inadequate inventory)

Like finished goods inventory policies, raw material and parts inventory policies are intended to minimize the sum of two classes of costs: the cost of carrying the inventory and the cost of carrying enough. Management policy with respect to purchase and inventory should be specified .The two basic timing factors are:

- 1. How much to purchase at a time
- 2. When to purchase

A well- known approach to computing the Economic Order Quantity (EOQ) uses the following formula.

$$EOQ = \sqrt{\frac{2A_0}{C}}$$

Where,

A= Annual requirements in units

Q = Average annual cost of placing an order

C = Annual carrying cost of carrying units in inventory for one year.

EOQ informs that the optimum quantity to be purchase at the minimum cost and the time when a purchase is to make is used to be re order point.

### **Cost of material and parts used Budget:-**

The quantity of material and parts required for planned production is specified in the materials and parts budget, and unit material and parts costs are specified in the purchases budget. The quantity and unit cost data are available to develop to budgeted cost of materials and parts that will be used. If the purchase budget anticipates a constant unit cost for material or part during the planning period, multiplication of units by the unit cost yields the budgeted materials or parts cost. Alternatively, when a changing unit price is planned for materials and parts, the budgeted of the cost of materials and parts used and the related inventory budgeted must be developed using a selected inventory budget must be developed using a selected inventory flow such as FIFO, LIFO, moving average or weighted average, FIFO is usually preferred because of its internal consistency (Gautam: 2062).

### **2.1.12 Direct Labor Budget**

#### **Meaning:-**

An estimate of direct Labor requirements essential for achieving the target of production budget gives birth to direct labor budget. This budget may give details about direct labor cost (i.e. Budgeted units of production may be multiplied by labor cost per unit) or about both direct labor hours are estimated for budgeted units and then multiplied by wage rate per hour.

"Direct labor hours are estimated on the basis of past experience for each category of workers with reference to budgeted units of production. Internal factors like type of the production process factors like the types of payment and system of cost records will decide the possibility of expressing production units in term of labor hours. The personnel department will suggest the wage rates that are likely to prepaid. It is mostly calculated on the bases of historical relationship between wages paid and direct labor hours worked in the department or for the product after considering the current situation. This budget may also be termed as manpower Budget

Direct labor is defined as those labor costs directly identifiable with the production of specific units of finished production.

The main objectives of direct labor budget are as follows;

- ) To assess labor requirement.
- ) To prepare manpower planning.
- ) To estimate per unit labor cost.
- ) To estimate per unit labor cost.
- ) To estimate cash requirements.
- ) To give information for cash budget
- ) To control the labor budget.

### **Developing the direct labor budget-**

The approach used to develop the direct labor budget depends primarily on the:

1. Method of wage payment.
2. Types of production process involved.
3. Availability of standard labor times and
4. Adequacy of cost accounting records relating to direct labor costs.

Basically there are three approaches to the development of direct labor budget as follows (Walsh: 1997).

- I. Estimate the standard direct labor hours for each unit of each product, then estimate the average wages rates by department, cost center or operation; multiple the standard time per unit of product by the average hourly wage rate, giving the direct labor cost per unit of output for the department, cost center or operation by the unit direct labor cost rate to obtain the total direct labor cost by product.
- ii. Estimate ratio of direct labor cost to some measure of output that can be planned realistically.
- iii. Develop personnel tables by enumerating personnel requirements. (Including in each responsibility center)

### **2.1.13 Overhead Budget**

#### **Meaning:-**

Overhead expenses budget plays important role for organization to accomplish profit planning and control objectives. It is classified by responsibility, designated as controllable and non- controllable and estimated with respect to their behavior pattern.

There are three broad categories of expenses: factory or manufacturing overhead, selling and distribution expenses and general administrative expenses.

Manager should view expense planning and control as necessary to maintain reasonable expenses levels to support the objectives and planned programs of the enterprise. Expense planning should be not focus on decreasing expenses, but rather on better utilization of limited resources. Viewed in this light, expenses planning and control may cause either decreased or increased expenditures. Expenses planning and control should focus on relationship between expenditures and the benefits derived from those expenditures. The desired benefits should be viewed as goals, and sufficient resources must be planned to support the operating activities essential for their accomplishment.

Knowledge of cost behavior that is the response of cost to different volumes of output is essential in cost planning and control entire enterprise or in the context of a specific responsibility center.

#### **Manufacturing overhead expenses:-**

Manufacturing overhead is that part of total production cost not directly identifiable with specific products or jobs. Manufacturing overhead consists of (1) indirect material, (2) indirect labor ( including salaries) , and (3) all other miscellaneous factory expenses , such as taxes, insurance, depreciation, supplies, utilities and repairs. Manufacturing overhead includes many dissimilar expenses; therefore, it causes problem in the allocation of these costs to products.

There are two distinct types of responsibility centers in most manufacturing companies:

**Production and services:** Producing centers are those manufacturing departments that work directly on the products manufactured. Service department do not work on the products directly, but rather they furnish service to the producing department and to other service departments. Responsibility for the operation of each department should be classified separately in the chart of accounts used by the cost accounting department.

### **2.1.14 Selling and Distribution Expenses Budget**

#### **Meaning:-**

Selling and distribution expenses include all costs related to selling, distribution, and delivery of products to customer. These expenses are not identified to specific product and hence are not allocated directly to each product. A separate distribution expenses plan should be developed for each responsibility center in the distribution function. Many companies allocate these expenses as a certain percentage out of total expenses. The top marketing executive has the overall responsibility for developing the distribution expenses plan. The manager of each responsibility center should be assigned direct responsibility for that department's distribution expenses plan. Thus the promotion manager should be responsible for developing promotion plan, and the field manager for developing both their marketing plan and distribution expenses budget. These budgets should be detailed by the sales managers should be based on planned volume of activity or output. Usually the activity base chosen is the sales amount in Rs/Dollars. Carefully planning of such expenses affects the profit potential of the firm.

Fundamentally the top marketing executive has the direct responsibility for planning of the optimum economic balance (for profit potential) (1) the sales budgets (2) the advertising budget and (3) the distribution expenses budget. Therefore, profit planning and control views sales, advertising, and distribution expenses as the basic problem rather than as three separate problems (Joshi: 2005).

### **2.1.15 Administrative Expenses Budget**

Administrative expenses include those expenses other than manufacturing and distribution. They are incurred in the responsibility centers that provide supervision of and service to all functions of the enterprise, rather than in the performance of anyone function. Because large portions of administrative expense are fixed rather than variable, the notion persists that they cannot be controlled. Aside from certain top management salaries, most administrative expense are determined by management therefore; there is strong tendency to overlook their magnitude and effect on profits. Each administrative expenses should be directly identified with a responsibility

center, and the center manager should be responsible for planning and controlling the expenses (Welsch: 2005).

This fundamental of expense control is especially important for administrative costs because there is often a failure to pinpoint responsibility for expenses of a general nature. For this and other reasons, many companies have found it helpful to apply the fixed variable expense concept to administrative expenses. It is advisable to base budgeted administrative expenses on specific plans and programs. Experience, adjusted for anticipated changes in management policy and general economic conditions is helpful. Because most administrative expenses are fixed, an analysis of the historical record will often provide a sound basis for budgeting them.

### **2.1.16 Capital Expenditure Budget**

#### **Meaning:-**

Capital budgeting is the marketing of long- term planning decisions for investment and their financial budgeting then consists in planning the deployment of available capital for the purpose of maximizing the long - term profitability of the firm.

A capital expenditure is the use of funds to obtain operational assets that will a) help earn future revenue or b) reduce future costs. Thus capital budgeting is the process of planning and controlling the strategic and tactical expenditures for expansion and contraction of investment in operating assets. Capital expenditure includes such fixed (i.e. operational) assets as property, plant, equipment, major renovation and plants. Typically, capital expenditure projects involve large amount of cash, other resources and debt that are tied up for relatively long period.

Capital expenditure becomes in the future as their related goods and services are being used to earn higher future profits from future revenue or to achieve future cost saving. Therefore, capital expenditure involves two major planning and controlling phases namely. 1) Investment and 2) expenses.

The investment decisions of a firm are often referred to as capital budgeting a capital expenditure decisions. A capital budgeting decision may be defined as the firms

decision to invest its current funds most efficiently in long term assets in anticipation of an expected flow of benefits over a series of years

Capital budgeting involves the generation of investment proposal, the evaluation of cash flows, the selection of project based on acceptance criterion and finally continual evaluation of investment projects after their acceptance.

Capital budgeting may be defined as the decision-making process by which firms evaluate the purchase of major fixed assets, including buildings, machinery and equipment. It also covers decisions to acquire other firms, either through the purchase of their common stock or groups of assets that can be used to conduct an ongoing business. Capital budgeting decisions are the firm's formal planning process for acquisition and investment of capital and results in a capital budget that is the firm's formal plan for the expenditure of money to purchase fixed assets.

#### **2.1.17 Planning and Controlling the Cash Budget**

A comprehensive profit planning and control program establishes the foundation for a realistic cash budget. To plan, control and safeguard the cash assets of the enterprise is one of the important responsibilities of the management. The planning and control of the cash inflows and cash outflows is important and cash budget is an effective way for this. Cash budgeting not only plans and controls the cash inflows and outflows but also assesses cash needs and effectively uses excess cash. The cash plan or budget is prepared from the previously completed budgets such as the sales, materials, and labor, overhead and capital expenditure budgets.

A cash budget involves detailed estimates of anticipated cash receipts and disbursements for the budget period or some other specified period. It has generally been recognized not only as an extremely useful but also as an essential management tool. Planning cash requirements is basic to good business management.

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 includes two parts: (1) the

planned cash receipts (inflows) and (2) the planned cash disbursements (outflows) (Gyawali:2064).

### **2.1.18 Flexible Budget**

The budget in which the costs are specified according to the nature such as fixed, variable, and semi fixed or variable develop the profit plan is called the flexible expenses budget. Flexible budget directly relate to expenses. The fundamental concept of flexible budget for expenses it that all expenses are incurred because of time output or productive activity of combination of time and output or activity. This budget is the complementary to the tactical profit plan. The process of flexible budget is used to provide expenses plans for the tactical profit plan and to prepare expenses plans adjusted to actual output for comparison with actual expense in a periodic performance reports. Flexible budget are also called variable dynamic, activity and output, adjusted expenses budget.

"A budget which by recognizing the difference between fixed, semi- fixed and variables costs are designed to change in relation to the level of activity attained(Gyawali:2064).

### **2.1.19 Completion and Implementation of the Annual Profit Plan:-**

The process for the development of an annual profit plan is not only preparing the various functional budgets but also preparing the planned income statement and balance sheet. This statement is the integration of all functional budgets.

To complete the annual profit plan of an enterprise the following statement should be included:

1. Planned statement of cost of goods manufactured.
2. Planned statement of cost of goods sold.
3. Planned income statement.
4. Planned balance sheet.

The financial test, the efforts and cost involved in developing a profit plan is worthwhile if it is implemented properly so as to meet or exceed all major objectives. For this purpose, management enterprises participation and communications, making

accountable to the concerned responsibility centers. The copies of complete profit plan conference should be held to recognize actions, flexibility and continuous control of activities. It should convey the profit plan to all level of management considering profit planning as a managerial tool for obtaining objectives.

#### **2.1.20 Control Process of the Profit Plan**

##### **Performance Report:-**

Performance reporting for internal management use is an important part of a comprehensive profit planning and control system. Performance reports are usually prepared on monthly basis and follow a standardized format from period to period. Such reports are designed to facilitate internal control by the management. Performance reports actual results compared with goals and budget plans. Such reports are designed the pinpoint both efficient performance.

##### **Essential Features of Performance Reports.**

Performance reports should be:-

- i. Tailored to the organizational structure and locus of controllability (that is, by responsibility centers)
- ii. Designed to implement the management by exception principle.
- iii. Repetitive and related to short time periods.
- iv. Adapted to the requirements of the primary user.
- v. Simple, understandable, and report only essential information.
- vi. Accurate and designed to pinpoint significant distinction.
- vii. Prepared and presented promptly.
- viii. Constructive in tone.

#### **2.1.21 Budget Variance**

The deviation between budgeted or planned goals and actual result is said to be variance. Performance report shows such variance. The next step is to analyze such variance and to determine the underlying causes for managerial planning and control purposes. Variance is the difference between standard cost and actual cost.

There are numerous ways to study or investigate variances to determine the underlying causes. Some of the primary approaches are following: (Ibid page 570).

- 1) Conference with responsibility center managers and supervisors and other employees in the particular responsibility center involved.
- 2) Analysis of the work situation including the flow of work, coordination of activities, effectiveness of supervision, and other prevailing circumstances.
- 3) Direct observation.
- 4) on - the spot investigations by line managers.
- 5) Investigation by staff groups
- 6) Internal audits.
- 7) Special studies.
- 8) Variance analysis.

Variance analysis is involves a mathematical analysis to two sets of data in order to gain insight into the underlying causes of a variance. One amount is treated as the base, standard, or reference point. Variance analysis has wide application in financial reporting. It is frequency applied in the following situations:

- 1) Investigation of variables between actual results of the current period and the actual results of a prior period.
- 2) Investigation of variances between actual results and standard costs.
- 3) Investigation of the variance between actual results and planned or budget goals reflected in the profit plans.

We can analyze the variance in the following areas:

1. Sales variance
2. Material variances
3. Direct labor variances.
4. Manufacturing overhead variance.

Generally, the following steps involved in analyzing variances which are as:

1. Setting standard.
2. Measurement of performance.
3. Analyzing variance.
4. Taking correcting action.

There are two kinds of variances i.e. favorable and unfavorable variance. We should analyze the variance on each of the functional budget variance and so on. Management of any enterprises should set

Control limits of variance and those variance beyond the limits should be investigated property. Variance analysis is an important tool, which increase the usefulness of periodic performance reports. It helps management to take corrective action(Sharma & Gupta:1995).

## **2.2 Review of Related Studies**

The review of literature is a crucial aspect of the study. The main purpose of the literature review is to find out what works have been done on the area of the research, problem under the study and what has not been done in the field of the research study being undertaken. There are very few researches have been made in the area of profit planning whatever have been made are mostly concentrated to the state owned public enterprises and those are not in depth and detail. An attempt has been made to review some dissertation on profit planning which has been prepared and submitted to the faculty of management Tribhuvan University.

Bhattarai (2005) has conducted a research about “Financial Analysis of Nepal Water Supply Corporations and Nepal Telecom Corporations”: A comparative study. This research was mainly concerned with the current practice of financial analysis and it’s effective in NWSC and NT.

The main objectives of this study:-

- a) To investigate the various financial ratios and their variations from their variation from the mean values of NWSC and NT.
- b) To examine the net working capital of NWSC and NT.
- c) To highlight the sources and uses of funds of NWSC and NT and
- d) To identify the operational and financial problems of NWSC and NT.

Major Findings:-

1. Comparatively, NWSC has more favorable short-term solvency position than NT, because NWSC has higher ability to meet short term obligations in comparison to NT. However, the consistency point of view NT is better than NWSC because of NWSC has increasing and highly fluctuating trend and NT has increasing and less fluctuating position of current ratio.

2. Comparatively, since NT has higher quick ratio than NWSC. NT has the ability of immediate payment of short term obligations than NWSC.
3. Comparatively, NT has favorable day – to- day operation efficiency than NWSC, because of NT’s higher cash to current assets ratio than NWSC.
4. Comparatively, NWSC has favorable debt situation than NT, because the total debt to total assets ratio of NWSC is lower than NT. It means NWSC has relatively lower debt portion in comparison to NT and maximization of total assets.

Gurung (2007), has submitted his research work entitled “A Research on profit planning in public utilities of Nepal; a case study of Nepal Water Supply Corporation”.

#### **Objectives of the Study:-**

The general objective of this study is to examine the present comprehensive profit planning system adopting by NWSC. Thus, the specified objectives are as follows:

1. To analyze the various functional budgets which are prepared by NWSC?
2. To evaluate the various budgeted and actual result.
3. To obtain a true picture of profit planning diversification in NWSC.
4. To draw a picture of utilization of assets and resources of NWSC.
5. Based on findings analysis, to provide a package of suggestions and recommendation for improving the profit plan.

#### **Major Finding:-**

After analyzing the present practice of profit planning in Nepal Water Supply Corporation in details, this study concludes the following points.

1. Water leakage, theft and wastage is one of the remarkable problems of NWSC which the profit earning capacity of the corporation.
2. NWSC has high amount of fixed cost.
3. Overhead budget is not prepared in a systematic and scientific manner by NWSC. All expenditure is shown in operating expenses.

4. NWSC hasn't adopted the cost control techniques. So the cost is increasing in each fiscal year.
5. The accumulated amount of account receivable is in increasing trend, which shows that the corporation fails to collect its revenue in time. It shows, there is no proper receivable management policy.

Parajuli(2006), has submitted a thesis on the topic 'A comparative ratio analysis of public utility sector with reference to NEA, NWSC and NT. The research was mainly concerned with the current practice of financial analysis and its effectiveness in NWSC, NEA and NT.

The major findings of this study are as follows:

1. The current ratio of NEA is not satisfactory throughout the study period. Average Current Ratio of NWSC is 2.16:1 which depicts sound liquidity position. NWSC is able to meet the short- term loan through its current assets. Position of Current Ratio in NT is very sound.
2. Average quick ratio of NEA is 0.53:1, which is not satisfactory. Quick ratio of NWSC during the study period is sound with average of 1.39:1 .It can easily meet the current liabilities with quick assets. The average quick ratio 4.61:1 of NT shows that current liability is easily met through quick assets.
3. Debt equity ratio of NEA is not satisfactory during the study period. Debt equity ratio of NWSC is satisfactory during the study period with an average of 1.34: 1. Similarly D/E ratio of NT during the study period is satisfactory.
4. Debt to total capital ratio of NEA is satisfactory. DTC ratio of NWSC is also satisfactory. Average DTC ratio 50:1 shows it has ideal capital structure. Similarly DTC ratio of NT is in decreasing trend.
5. Interest Coverage Ratio of NEA is not able to pay its interest through its gross profit. NWSC has very poor IC ratio. Its continuous loss and high interest amount IC ratio badly affected. Average IC ratio of NT is 0.21, which is sound position for many organizations.

Shrestha (2007) has submitted a thesis on the topic 'profit Planning and control in public utilities sector a comparative study on profit planning and budgetary system of Nepal

Water Supply Corporation and Nepal electricity Authority. The main objective of the study was evaluating the profit planning and budgetary system of Nepalese public enterprises. He focuses on the leading public enterprises NWSC and NEA. After his research work he pointed various findings based on the analysis of data and information as follow:

1. Both in NWSC and NEA goals and objectives are not communicated to lower staff. It is only conveyed to official level.
2. NWSC's actual sales in units are less than budgeted sales. Whereas NEA has more budgeted sales in units except in FY 2056/2057.
3. Production unit figure forecasted and achievement of NWSC is inconsistent and more variable than that of NEA.
4. Total actual overhead is greater in NEA than NWSC.
5. There is perfectly positive correlation in NEA and NWSC.
6. Achievements of NWSC are more variable than budgeted figure in comparison of NEA due to inadequate forecasting practice.
7. There is lack of proper communication and coordination among various responsible departments. There are not two way communication systems. There is only one way and only up to down communication available.
8. There are not the proper systems of accountability and responsibility in case of bad performance in both organizations.
9. NWSC is not capable to produce drinking water line according to customers demand due to high percentage of leakage, where as NEA is suffering from high rate of power loss as sales is below than the production.
10. NWSC and NEA are suffering from high fixed cost.
11. In both organizations there is high pressure of political parties and government.
12. There is no proper system of segregating cost into fixed, variable and semi variable in both organizations.
13. The both organizations have no clear cut vision and concept of profit planning system.

## CHAPTER -III

### RESEARCH METHODOLOGY

#### 3.1 Introduction

Research methodology provides the methodology followed to achieve the objectives stated in this research. This chapter describe the following aspects of research methodology; research design, sample selection, data collection procedure, data processing, definitions of variables, meaning and definition of statistical and financial tool, used in this research design. Result are presented in simple way using tables, graphs and diagrams. Detail research methods are described in following heading.

#### 3.2 Research design

“Research design is the plan structure and strategy of investigation convinced so as to obtain answer questions and to control variance. The plan is the overall scheme of program of the research. It includes an outline of what the investigator will do from writing the hypothesis and their operational implication to the financial analysis of data: (Wolf and Pant: 1999).

The research is a plan to obtain the answer of research questions through analysis of data. The research design of this study is analytical and descriptive as this study is an examination and evaluation of budgeting procedures in the process of profit plan of NWSC and NT. The study is closely related with various functional budgets and other accounting statements as well as the actual results of the budgets. These information are used to analyze and evaluate the profit planning system of NWSC and NT.

#### 3.3 Population of Sample:-

The population of this study comprises three public utilities currently operating in the country. The samples consists of two judgementally selected public utility sectors- NWSC and NT. These units represent 66.66% of the total population and are comparable to each other in various aspects.

### **3.4 Hypothesis:-**

In the light of the objectives of the study, following null and alternative hypothesis have been developed for this research:

**Null hypothesis, Ho:**  $\mu_1 = \mu_2$  there is no significant differences between the profit planning and control of NWSC and NT.

**Alternative hypothesis, H1:**  $\mu_1 \neq \mu_2$  there is significant differences between the profit planning and control of NWSC and NT. (Two-tailed)

### **3.5 Nature and Sources of Data:-**

Although present study is basically conducted on secondary data, only Secondary data used of this study.

**Secondary sources:-** Secondary sources used in this are listed below:

- a) Officials records and publication of NWSC and NT
- b) Published and Unpublished reports
- c) Magazines Publication
- d) Personal dialogues
- e) web site.
- f) E-mail Internet.

### **3.6 Data Collection Procedures:-**

Secondary data have been collected from the annual reports of NWSC and NT. Similarly other necessary data have been collected from the publication of corporation, Coordination council of Ministry of Finance, Central Bureau of static, National planning commission, Official accounting and planning records of NWSC and NT and related publication. For the reference of materials, the researcher of materials, the researcher visited library of Nepal commerce campus, Shaker Dev campus and Central Department of T.U.

### **3.7 Research Variable:-**

Sales, production, inventories, purchase expanses, capacity utilization, profit and loss, manpower, capital expenditure and cash flow relating to long term and short term period of NWSC and NT are the research variable of present study.

### **3.8 Analytical tools:-**

Financial statement can provide various useful information for the parties directly or indirectly involved in the business. Selection of suitable and proper analysis makes a data effective. The researcher has used two sorts of tools:

- A) Financial tools
- B) Statistical tools

#### **3.8.1 Financial Tools:-**

Financial tools are those, which are used for the analysis and interpretation of financial data. These tools can be used to get the precise knowledge of the enterprises, which in turn are fruitful in exploring the strengths and weakness of the financial policies and strategies. In order to meet the purpose of the study, Ratio analysis has been used.

Ratio analysis helps us to summarize the large quantities of financial data and to make quantitative judgments about the organization's financial performance of organizations:

- a) Current ratio
- b) Total debt ratio
- c) Working capital turnover ratio
- d) Fixed asset turnover ratio
- e) Total asset Turnover Ratio
- f) Capital Employed Turnover Ratio
- g) Operating profit ratio
- h) Net profit ratio
- i) Net profit to fixed asset ratio
- j) Return on capital employed ratio

#### **3.8.2 Statistical Tools:-**

Various statistical tools can be used to analyze the data available to the researcher. These tools are used in researcher in order to draw the reliable conclusion through the analysis of financial data.

Following tools are used for the purpose.

- a. Arithmetic Mean

$$\text{Mean } (\bar{x}) = \frac{\sum x}{N}$$

- b. Coefficient of Variation

$$\text{C.V.} = \frac{s}{\bar{x}} \times 100\%$$

- c. Student's t-Test

$$t = \frac{\bar{x} - \bar{y}}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

- d. Co-efficient of Correlation

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

- e. Probable error of Correlation Coefficient

$$\text{PE} = \frac{1.96 r^2}{\sqrt{n}}$$

- f. Least Square Linear Trend

$$Y = a + bx$$

## **CHAPTER -IV**

### **DATA PRESENTATION AND ANALYSIS**

Profit panning is a systematic approach for attaining effective managerial performance. Since the profit is a primary measure of business success, any business enterprise therefore needs to increase the chances of making profit. Hence the primary purpose of profit planning is to increase the chances of making profit in the enterprises. Comprehensive profit planning and control or budgeting continues to be of prime important in virtually all organization. Planning involves the control and manipulation of relevant variable, controllable and non controllable and reduces the impact of uncertainty so that the enterprises could be saved from chances of making losses.

The main purpose of this research paper is to examine the profit planning system in NWSC and NTC. To accomplish this objective, this chapter of the paper will analyze the various aspects of profit planning and their accomplishment. Profit planning is a managerial tool, which is applied in every business, endeavours either manufacturing or non-manufacturing enterprises or units. Profit planning is the format expression of the enterprises plans, goals and objectives stated in financial terms for specific future period of time.

Today business is large and changing public expectation suggest that plan should be formalized within a framework or four major parameters, economic, technological, social and political. Generally two types of profits planned are formulated both strategic and long-range profit plans and tactical short-range profit plan.

This chapter is central nervous system, which helps to provide conclusion after detail analysis. This chapter consists of presentation and analysis of profit planning and control of Nepal Water Supply Corporation and Nepal Telecom. The planning parts includes Sales, Production, Expenses cash flow, Profit & Loss A/C, balance sheet and other related figures of previous year which are presented and analyzed to know the overall economics and financial trend and to estimate the possible future trend of NWSC and NTC. Similarly the control parts include CVP Analysis, Flexible budget, and Variance Analysis and Ratio analysis.

For the purpose the study covers the period of years from 059/060 to 064/065.

#### **4.1 Sales Budget:-**

Sales budget is the primary step in developing the overall budget procedures. Sales are the primary source of cash and all other functional budgets are prepared on the basis of sales budget. The capital additions needed, the amount of expenses to be planned, the manpower requirement materials, cash, production volume etc. depends on the volume of sales. The sales plan is that step which opens the door of financial plan. It is an estimation of sales in uncertain period of future. When the actual sale is not far from the planned sales than it is known as good plan. The efficiency of planner or planning expert can be evaluated from the comparison between actual and planned sales.

The sales budget is the foundation for planning in business organization. It is the primary step in developing the overall budget procedure and it is the primary source of cash and all other functional budgets are prepared on the basis of sales budget. The sales plan is the first step, which open the door of all financial plans. The sales plan can be a good plan when an actual sale is not far from the planned sales. For this, sales budget preparation should be done in realistic ground.

If sales budget is not realistic, all other budgets will not realistic. Nepal Water Supply Corporation (NWSC) has a practise of formulation of sales budget for the coming fiscal year. It also forecasts demand for long term, which is known as long-term load forecast. NWSC prepares sales budget on the basis of the nature of consumer. Consumer are domestic, Commercial and non-commercial. The demand forecast for a given category of consumer depends on the growth of user population.

Nepal Water Supply Corporation applies following major methods for the future projection of water demand.

- i. Time trend Extrapolation
- ii. Econometric multiple Regression
- iii. Field Survey
- iv. Planning directorate of NWSC has overall responsibility to prepare sales budget. When the Water supply program is started, then, consumers

themselves contact to get water supply service. There is no competitor of NWSC and it enjoys absolute monopoly in water supply sector.

Sales budget is prepared by NT according to the nature of consumers. Consumers are categorized like government, business organization residential, special, residential service.

The demand forecast of a given consumer category will depend on the growth rates of the numbers of connection, the average telephone use per connection and the user population. Therefore the evolution of each of these variables needs to be analyzed separately. In particular, connection policy is a factor that must be carefully studied. In view of their low levels of the income in some areas, high connection charges could act as a significant barrier and vice versa.

Following Table no. 1 shows the picture of sales trends from F/Y 059/060 to 064/065.

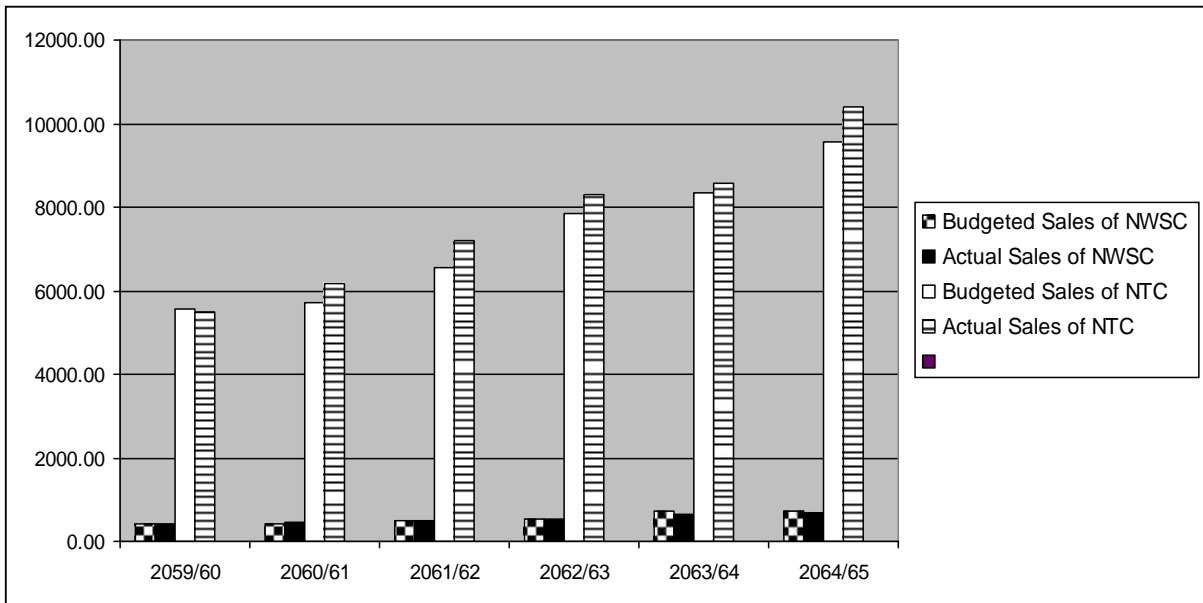
**Table No. 1**  
**Sales Budget and Achievement**

(Rs. In Million)

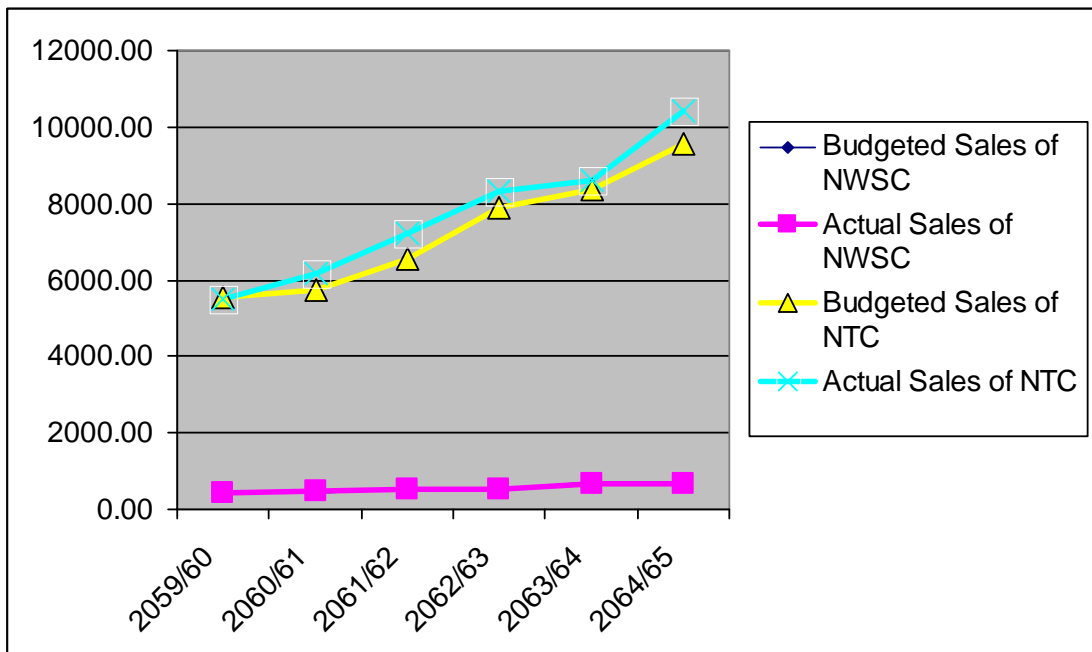
F/Y	NWSC			NT		
	Budget	Actual	Ach (%)	Budget	Actual	Ach (%)
2059/60	424.61	421.61	99.29	5550.40	5487.18	98.86
2060/61	438.02	462.59	105.61	5724.63	6159.02	107.59
2061/62	511.95	513.33	100.27	6558.26	7208.08	109.91
2062/63	539.95	530.81	98.31	7865.30	8312.22	105.68
2063/64	706.10	662.41	93.81	8358.65	8584.14	102.70
2064/65	736.24	683.85	92.88	9547.82	10413.65	109.07
Total	3356.87	3274.6	98.36	43605.06	46164.29	105.63
Mean	559.48	545.77		7267.51	7694.05	
S.D	132.91	106.10		1586.17	1790.72	
C.V	23.76	19.44		21.83	23.27	
R	0.9955			0.9889		
P.E(r)	0.0025			0.0061		
Y= a + bX	545.77 + 42.99X			7694.05 + 740.49X		
Combined S.D	4.43					
Calculated Value of /t/	0.95					

Source: Annual Report NWSC&NT:2005

**Diagram No. 1**  
**Budget and Actual Sales of NWSC and NT**



**Graph No.1**  
**Budget and Actual Sales of NWSC and NT.**



Actual sales achievement of NWSC is highly consistent with budgeted sales. The sales revenue percentage, which is increased in FY 2060/61, indicates the unexpected increment in traffic rate. Similarly sales amount of NT are also highly consistent in

the study period except in F/Y 064/65. The average sales achievement of NT 105.63% is more than average sales achievement of NWSC 98.36%.

After we analyze the budgeted and actual sales figure of each year, we can say that targets are set on realistic basis. It can say that target is based on historical data and previous year's sales performance.

The budgeted and actual mean, S.D., C.V., of NWSC is Rs. 559.48 and Rs. 545.77, 132.91 and 106.10, 23.76% and 19.44% respectively which shows actual sales is less variable than the budgeted sales because C.V. of actual sales 19.44% is less than C.V. of budgeted 23.76%. Similarly the budgeted and actual mean, S.D., C.V. of NT is Rs.7267.51 and Rs.7694.05, 1586.17 and 1790.72, 21.83% and 23.27% respectively which shows actual sales are more stable than the budgeted sales as C.V. of budgeted sales 23.27% is higher than the of C.V. of actual sales 21.83%.

The series for which greater C.V is said to be more variable or conversely less consistent and a distribution with smaller C.V. is said to be less variable, more consistent, more uniform, more stable or less homogenous. Therefore the C.V of actual sales achievement of NWSC 19.44% is less than C.V of actual sales achievement of NT 23.27% shows that NT has less uniformity between budgeted sales and actual sales.

Correlation of Coefficient can be used to analyze the relationship between budgeted sales and actual sales. The sales achievement should increase as the budget increase and vice versa. With help o Karl Pearson's coefficient of correlation ( $r$ ) has determined the correlation between budgeted and actual sales. But calculation  $r$ , we can examine whether or not the actual sales will be changed in the same direction of the change in budgeted sales.

For the calculation of ' $r$ ' budgeted figures denoted by "X" are assumed to be independent variables and actual figures denoted by "Y" are assumed to be dependent variable. The achievement will be large if the target sales are large and vice versa. And Significance of " $r$ " is tested with probable error of " $r$ ".

Correlation of co-efficient appeared greater than six times the probable error in both NWSC and NT. I.e. NWSC ( $0.9955 > 6 \times 0.0025$ ) and (for NT  $0.9889 > 6 \times 0.0061$ ).

They have been able to verify that 'r' of both enterprises is positive as significant level. This positive correlation is not only pure chances. The Test of significant of 'r' shows that there is significant positive relationship between the target and achievements.

Therefore we can say there is perfect correlation between budgeted sales and actual sales. The actual sales will change in the same direction as the budgeted sales will, In short, Correlation tests make the concept clear that sales budget is prepare well.

The statistical tools, least square method can be used to analyze the trend of actual sales and to estimate the possible future sales for a given time. Time elements is an important factor, which determinate the future sales. This time series relationship can be expressed in term of straight line trend by least square method.

Fitting Straight line trend by least square method:-

Here Fiscal Year 061/62 is assumed as base year so the value of X in Fiscal Year 061/62 is zero. So we have the negative for the year before 061/62 and positive for the year after 061/62.

To fit the straight-line trend, the time factor is considered as independent factor and sales as dependent factor. Then the straight-line trend of actual sales(Y) upon times in expressed by:

$$Y = a + bX; \text{ where } X \text{ is time}$$

The trend line of NWSC and NT is Rs. 545.77 + 42.99X and Rs. 7694.05 + 740.49X respectively shows the positive figures of sales indicating the trend of past years continue in future in both the enterprises. Given the value of X (i.e. relevant year 2061/62) value of Y (i.e. expected sales achievement) can be estimated.

The calculated value of t (0.95) remained less than tabulated value (2.306\_ at 5% level of significance level at 8 no. degree of freedom. Hence null hypothesis has been accepted i.e. the mean of actual sales achievement of NWSC and NT doesn't differ significantly.

### **Tactical Short Term Planning:-**

In harmony with an overall profit plan, plans for short run, generally for coming one-year period are developed. Tactical short-term plans should be as detailed and comprehensive as possible. Tactical short-range plans should be detailed by months, even by weeks or days.

The following table no.2 and 3 show the practise of preparing short-range sales budget for coming fiscal years.

**Table No. 2**

**Summery of Sales Budget and Achievement of NWSC for F/Y 2064/65**

(Rs. In million)

Particulars	Budgeted	%	Actual	%
Valley Sales	512.37	69.59	504.23	73.73
Out of Valley Sales	223.87	30.41	179.62	26.27
Total Sales	736.24	100.00	683.85	100.00

**Table No. 3**

**Summery of Sales Budget and Achievement of NT for F/Y 2064/65**

(Rs. In million)

Particulars	Budgeted	%	Actual	%
Local Telephone	2463.25	25.80	2653.07	25.48
STD	1512.68	15.84	1762.37	16.92
ISTD	2897.38	30.35	3377.94	32.44
Domestic Telegraph	0.10	0.00	0.10	0.00
International Telegraph	0.10	0.00	0.14	0.00
International Telex	5.00	0.05	4.22	0.04
Lease Circuits	23.54	0.25	24.88	0.24
Tele fax	0.30	0.00	0.44	0.00
Mobile and Internet	2254.87	23.62	2163.30	20.77
Interconnection	12.21	0.13	-15.29	-0.15
PCC Card	56.80	0.59	89.75	0.86
CDMA	65.25	0.68	86.35	0.83
Other	256.34	2.68	266.38	2.56
	9547.82	100.0000	10413.65	100.0000

NWSC prepares the sales budget by classifying the types of consumers( i.e. rural area, urban area as well as valley and out of valley) Where as NT prepares by region, time (i.e. month, quarter), and product wise.

Both NWSC and NT prepare long range and short range sales plan. But long range sales budget is not prepared in detail by both.

**Sales plan (in unit):-**

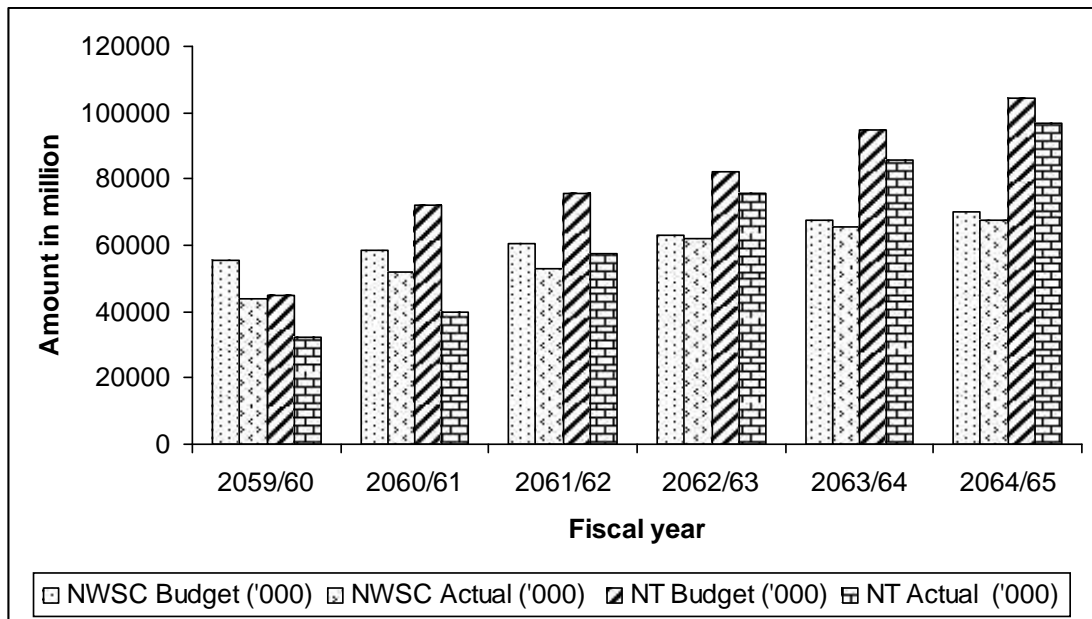
A budget sale (Targets and achievement) in units for F/Y 059/60 to 064/65 is shown in following table No. 4.

**Table No. 4.**  
**Sales Budget and Achievement (In Unit)**

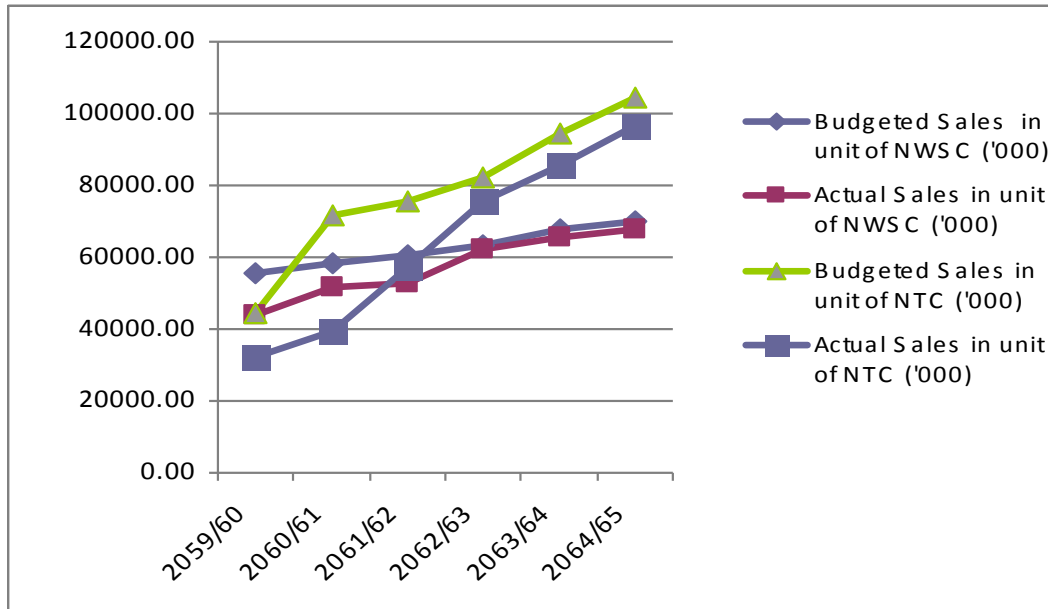
F/Y	NWSC			NT		
	Budget ('000)	Actual ('000)	Ach (%)	Budget ('000)	Actual ('000)	Ach (%)
2059/60	55480.00	43800	78.95	44648.00	32259.00	72.25
2060/61	58400.00	51830	88.75	71915.00	39637.00	55.12
2061/62	60590.00	52925	87.35	75586.00	57256.00	75.75
2062/63	63145.00	62050	98.27	82357.00	75689.00	91.90
2063/64	67580.00	65487	96.90	94566.00	85647.00	90.57
2064/65	69850.00	67596	96.77	104456.00	96789.00	92.66
<b>Total</b>	<b>375045.00</b>	<b>343688</b>	<b>91.16</b>	<b>473528.00</b>	<b>387277.00</b>	<b>79.71</b>
Mean	62507.50	57281.33		78921.33	64546.17	
S.D	5476.92	9240.20		20704.85	25787.91	
C.V	8.76	16.13		26.23	39.95	
R	0.9717			0.9354		
P.E(r)	0.0154			0.0344		
Y= a + bX	57281.33+ 3850.96X			64546.17 + 10858.68X		
Combined S.D	11.81					
Calculated Value of /t/	-0.56					

Source: Annual report NT and NWSC (2065).

**Diagram No. 2**  
**Budgeted and Actual Sales in unit of NWSC and NT ('000)**



**Graph No. 2**  
**Budgeted and Actual Sales in unit of NWSC and NT**



The average sales achievement units of NWSC are 91.16%. During study period it is above than 78%, but NT has 79.71% only and in F/Y 062/63 it seems above than 91%.

The smaller C.V. (8.27) of NWSC shoes less variability. But NT's C.V (18.70) shows there is a great uniformity between budget sales unit and actual sales unit.

The value of 'r' (0.9717) of NWSC reflects that there is perfectly positive correlation between budgeted sales unit and test of significance of 'r' is absolute. But the value of 'r' (0.9354) of NT also shows the correlation perfectly so as the P.E. (r) is greater than six time that of coefficient.

The regression line and least square trend shows increasing trend for future for both the enterprises.

The calculated value of (-0.56) is lower than tabulated value of (2.306) shows that budgeted and actual sales units of NWSC and NT are not differ significantly i.e. null hypothesis are accepted.

To conclude the characteristics of sales figures (targets and achievement) of NWSC and NT, following points can be drawn.

- 1) NWSC's actual sales achievement (in Rs.) except in F/Y 2062/63 is near about of Budgeted sales whereas NT except in F/Y 2062/63 has less sales than the budgeted.
- 2) The overall target (in units) is not fluctuating only in nominal quantity, in NWSC whereas target is not met at standard by NT.
- 3) Sales figures (target and achievement both) of NT are slightly inconsistent and variable than that of NWSC. Regarding units, NT is more inconsistent and variable than NWSC.
- 4) There is positive correlation between the actual sales and budgeted sales of both enterprises. NWSC has perfectly balance on budgeted and actual than NT in term of Rs. and units.
- 5) The regression equation of both enterprises shows there is increasing trend on actual sales than that of budgeted sales. The fixed portion of sales (in Rs.) of NT is higher.
- 6) The straight-line trend shows the positive figure for future of both NWSC and NT.

#### **4.2 Production Plan:-**

##### **NWSC:**

A production budget is prepared in relation to sales budget. For the purpose of the formation of profit plan, the sales requirement is to be translated in production plan. In the case of manufacturing concern, the sales plan compulsorily is to be translated in production plan. But in respect of utility concern, the production plan goes in the long run and according the availability of utility it seeks to its customers.

In case of NWSC we have given the name of production budget, it is the water collection and purchase budget of NWSC. As there is. NWSC prepares its production budget for a fiscal year in short term and both Water production and collection are the part of production budget. Production directorate in coordination with planning

directorates prepare production budget of NWSC. In respect of the production, existing projects and projects near about of completion are adjusted and government policy is also considered by NWSC while preparing its production budget.

**NT:-**

In the case of NT, production budget is a name given to the telephone point generation budget. Due to high demand, there is no any problem of selling the telephone point. So in such case, practices regarding closing inventory and looking inventory are not used in NT. Basically NT has practice to make strategic long-range production plan and make the estimation of load forecast. Production budget is prepared by planning directorate.

Production plan= Production plan is calculated as follows:

**Planned sales + Required Closing Inventory – Opening Inventory**

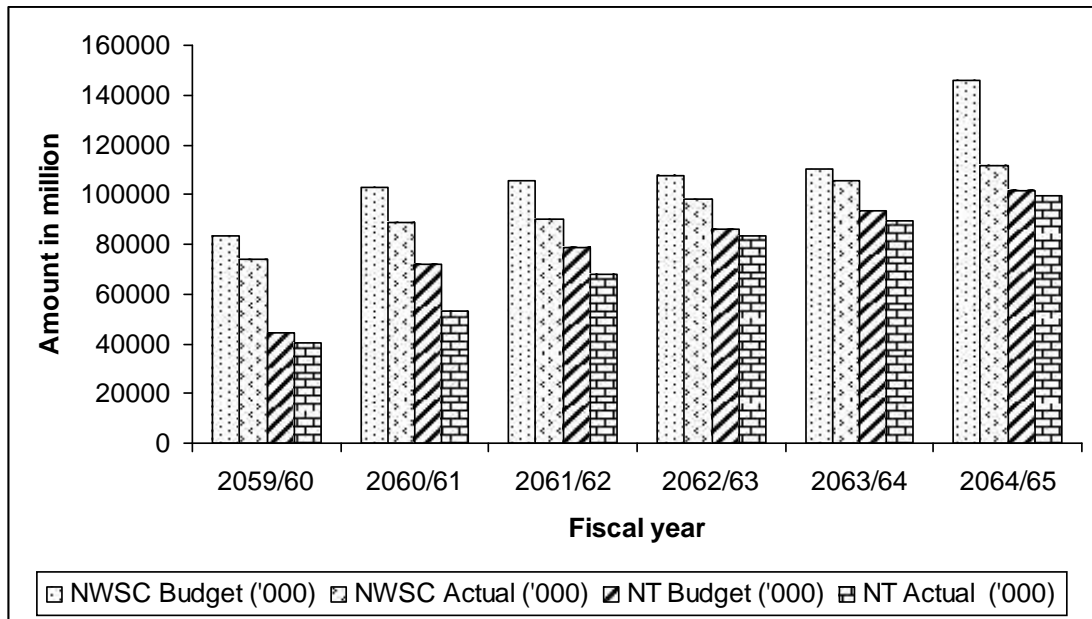
Table no.5 shows production target and achievement of both NWSC and NT form FY 2059/60 to 2064/65

**Table No. 5  
Budgeted and Actual Production in unit of NWSC and NT**

F/Y	NWSC			NT		
	Budget ('000)	Actual ('000)	Ach (%)	Budget ('000)	Actual ('000)	Ach (%)
2059/60	83585.00	74095.00	88.65	44648.00	40647.00	91.04
2060/61	102565.00	88695.00	86.48	71915.00	52926.00	73.60
2061/62	105850.00	90155.00	85.17	78567.00	67586.00	86.02
2062/63	107310.00	98185.00	91.50	86357.00	83567.00	96.77
2063/64	110550.00	105680.00	95.59	93562.00	89659.00	95.83
2064/65	145630.00	111586.00	76.62	101258.00	99587.00	98.35
<b>Total</b>	<b>655490.00</b>	<b>568396.00</b>	<b>87.33</b>	<b>476307.00</b>	<b>433972.00</b>	<b>90.27</b>
Mean	109248.33	94732.67		79384.50	72328.67	
S.D	20218.31	13409.84		19955.72	22681.89	
C.V	18.51	14.16		25.14	31.36	
R	0.8898			0.9587		
P.E(r)	0.0573			0.0223		
Y= a + bX	94732.67+ 5516.90X			72328.67+ 9509.54X		
Combined S.D	8.02					
Calculated Value of /t/	0.21					

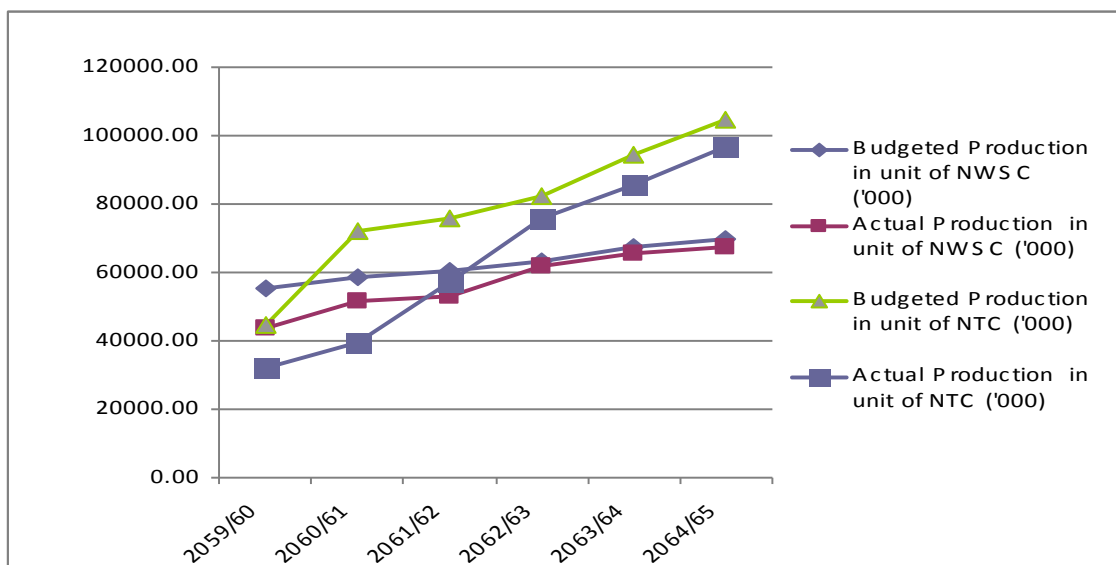
**Diagram No. 3**

**Budgeted and Actual Production in unit of NWSC and NT**



**Graph No. 3**

**Budgeted and Actual production in unit of NWSC and NT**



The above table shows actual production of NWSC is below than budgeted production in all the mentioned Fiscal year. The achievement percentage indicates that it is very satisfactory whereas NT is going on achieving its budgeted production but it is in increasing pattern over the years under study. The average production achievement of NT (90.27) is higher than that of NWSC (87.33).

The budgeted and actual Mean, S.D., C.V. of NWSC is 109248.33 and 94732.67; 20218.31 and 13409.84; 18.51% and 14.16%. This shows the actual production is less variable than the budgeted production. As greater, C.V. in budgeted production, we can say the budgeted production is of the nature of more variability than actual production.

The budgeted and actual mean, S.D., C.V. of NT is 79384.50 and 72328.67; 19955.72 and 22681.89; 25.14% and 31.36%. This shows that there is very more stability in actual production as C.V. of actual production is higher than the budgeted production.

The value of 'r' of NWSC and NT is 0.8898 and 0.9587 respectively shows there is perfectly positive correlation between budgeted production and actual production of both enterprises. And probable error's value of NWSC 0.0573 respectively proves the significance of value of 'r' as  $(0.8898 > 6 \times 0.0573)$ . Correlation coefficient of NT (0.0223) comes less than six time the probable error i.e.  $(0.9587 < 6 \times 0.0223)$ . It signifies that a positive relation occurs between budgeted and actual but the degree of relation is not much significant.

For fitting the regression line we have assumed actual production achievement as dependent upon the budgeted production. The regression lines of NWSC and NT  $94732.67 + 5516.90X$  and  $72328.67 + 9509.54X$  respectively shows positive relation between actual production and budgeted production.

As a straight line trend of NWSC is  $94732.67 + 5516.90X$  and NT  $72328.67 + 9509.54X$  both shows that the trend of past year increment in production of both enterprises will continue in future also.

Since the calculated value of 't' (0.21) is lower than the tabulated value (2.306), the null hypothesis is accepted i.e. mean of the budgeted and actual production of NWSC and NT not differs significantly.

Following table shows the actual sales and actual production of last six years.

#### **4.2.1 Comparison of Actual Production and Sales:-**

Production budget depends upon sales budget i.e. production should be done according to the sales plan. It means there is a relationship between sales and

production. Therefore, it is also necessary to analyze the whether the production meets sales or not and it's significant to analyze the relationship between sales and production

**Table No. 6**

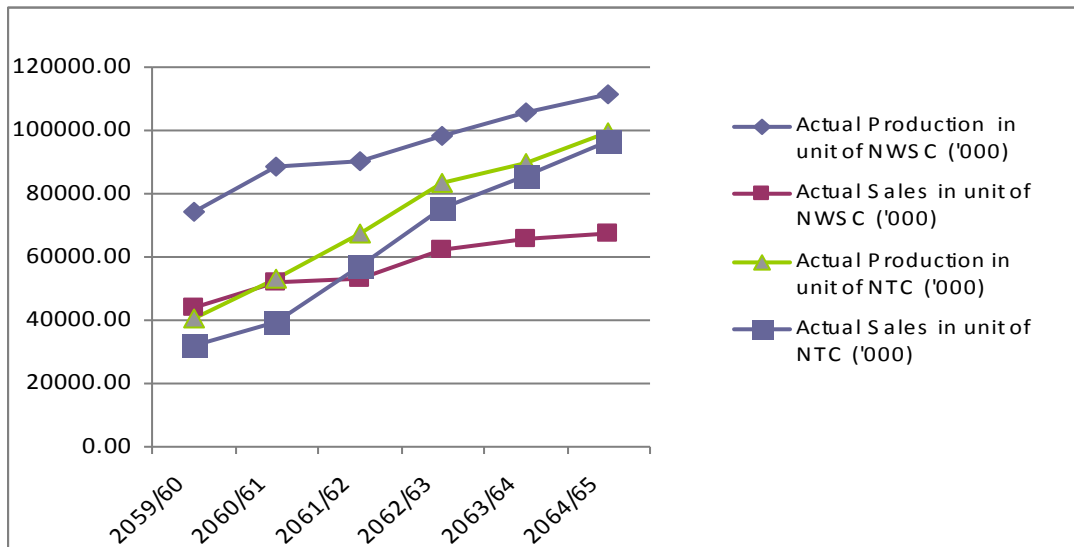
**Actual Production and Actual Sales in unit of NWSC and NT**

	NWSC			NT		
F/Y	Act. Prod. (‘000)	Act. Sales (‘000)	Ach (%)	Act. Prod. (‘000)	Act. Sales (‘000)	Ach (%)
2059/60	74095.00	43800	59.11	40647.00	32259.00	79.36
2060/61	88695.00	51830	58.44	52926.00	39637.00	74.89
2061/62	90155.00	52925	58.70	67586.00	57256.00	84.72
2062/63	98185.00	62050	63.20	83567.00	75689.00	90.57
2063/64	105680.00	65487	61.97	89659.00	85647.00	95.53
2064/65	111586.00	67596	60.58	99587.00	96789.00	97.19
Total	568396.00	343688.00	60.33	433972.00	387277.00	87.04
Mean	94732.67	57281.33		72328.67	64546.17	
S.D	13409.84	9240.20		22681.89	25787.91	
C.V	14.16	16.13		31.36	39.95	
R	0.9865			0.9952		
P.E(r)	0.0074			0.0026		
Y= a + bX	57281.33+ 3850.96X			54546.17+ 10858.68X		
Combined S.D	6.47					
Calculated Value of /t/	2.38					

Source: annual report 2065.

**Graph No. 4**

**Actual production and Actual Sales in unit of NWSC and NT**



Thus table shows that NWSC's actual production is more than actual sales. It might be due to water loss. An average of 75% of produced water has been sold out production in every year of study periods. An achievement sales percentage of NT is in increasing trend. There is unsold stock in underdevelopment area and Quota for office of NT makes the all-actual production lines are not being revenue generated.

The actual production of NWSC is a little bit more variable than the actual sales since the coefficient of variation of actual production is slightly greater than the actual sales. Where there is greater variability in actual production of NT than sale as C.V.  $31.36 < 39.95$ ) reflects.

The figure of 'r' of NWSC (0.9865) shows that there is highly perfect and positive correlation between actual sales and actual production. In similarly, NT "r" is 0.9952; so there is also high perfect and positive relation between production and sales.

Correlation coefficient of NWSC comes greater than six times of probable error i.e.  $(0.9865 > 6 \times 0.0074)$ . It implies that correlation between production and sales is highly positive. Correlation coefficient of NT comes to greater than six times of probable error i.e.  $(0.9952 < 6 \times 0.0026)$  which indicates the calculated value of coefficient is significant. Hence sales seem to change dependently with production of NT.

The regression line is fitted on the assumption that the dependent variable (y) is sales and independent variable (X) is production. Both enterprises have increasing trend in future. The NWSC has greater increment in sales if there is increase in production as compared to NT.

The calculated value of 't' (2.38) is lower than the tabulated value of t (3.306) shows that the actual production and actual sales of NWSC and NT are not differs significantly, so alternative hypothesis is rejected.

#### **4.2.2 Short Term Production Plan:-**

Theoretically, a production plan is second step in a manufacturing enterprise, which is developed after the marketing plan. But in case of NWSC and NT, production plan is primary step and all other sub-budgets, including sales, are prepared to support and in accordance to production target. So the planned volumes to be sold plus desired finished goods ending inventory minus finished goods opening inventory do not determine the planned volumes of production. Production volumes are determined by availability of required resources.

NWSC and NT both prepare short-term production budget.

IN case of NWSC short term production budget includes NWSC has very limited water resources within Kathmandu valley. High percentage of treated water is lost in the distribution system in the form of leakage and wastage system, further deteriorating the system supply. High percentage of leakage from distribution system due to the presence of very old pipes which have already lost their life. Physical and technical barriers make it difficult for equitable supply in all distribution areas. Thus, water production is one of the most difficult issues of NWSC. The water is directly related with the people. There is a positive relationship between water and people. Increasing people creates high demand of water. Similarly decreasing of people requires low demand of water. Unless and until, the leakage of water can not be controlled, the corporation can not provide the water as required by consumers. NWSC makes the production budget according to company's capacity on the based of short term planning as well as long term planning.

In case of NT, under the guidance of Directorate office, it prepares that budget by region, exchange, product, and area wise.

By analyzing the production budget of NWSC, following points can be stated in conclusion:

- 1) Production (unit) figures forecasted and achievement of NT is inconsistent and more variable than that of NWSC.
- 2) Budgeted production has less uniformity in both NWSC and NT.
- 3) There is perfectly positive correlation between forecasted and achievement for both enterprises.
- 4) Both NWSC and NT have positive regression line and least square trend.
- 5) An actual sale is significantly less than actual production and it reveals that there is remarkable loss in NWSC but NT is better in this regard.
- 6) To conclude it can be said that NWSC has a problem of water loss and NT has a problem of production than problem of sales.

#### **4.3 Profit and Loss A/C:-**

Profit and loss account shows the final conclusion of operation of an accounting year. Profit is the major element of each and every organization for its survival future development, fulfillment of social expectations and measurement efficiencies.

NT prepares a projected P/L A/C in advance. At the end of fiscal year, actual P/L A/C is prepared by the accounting dept. of NT to know about the profit or loss of the organization. The budgeted and actual P/L A/C of NT for the F/Y 2064/65 is as follows:

**Table No. 7**  
**Budgeted and Actual Profit and Loss of NT for FY 2064/65**  
**(Rs. In million)**

Particulars	Budgeted	Actual	Under/Over
Incomes:			
Operating Incomes (gross)	8573.65	10413.65	1840
Non-Operating Incomes	456.87	645.26	188.39
Total Income [A]	9030.52	11058.91	2028.39
Expenditures:			
Employee Cost	1450.52	1164.82	285.7
Operational & Maintenance Cost	860.54	655.12	205.42
Administration Cost	1342.67	921.32	421.35
Interest	115.68	63.98	51.7
Depreciation	1632.66	1195.18	437.48
Bonus	236.75	195.35	41.4
Incentive Package	152.34	126.69	25.65
Others	1425.84	1735.37	-309.53
Total Expenditure [B]	7217	4215.19	3001.81
Income Before Tax (A-B)	1813.52	6843.72	5030.20
Less: Income Tax	505.36	1907.08	1401.72
Income after Tax	1308.16	4936.64	3628.48
Income tax Adjustment	0.00	-344.61	-344.61
Prior Year adjustment (Inc/exp)	0.00	1.29	1.29
Profit available for Distribution	1308.16	4593.32	3285.16
Dividend	196.22	689	492.78
Net profit after Dividend	1111.94	3904.32	2792.38

**Table No. 8**  
**Actual Profit and Loss of NWSC for FY 2064/65**

**(Rs. In million)**

Particulars	Amount
Income:	
Sales	662.41
Other income	64.068
Total income [A]	723.478
Expenditure:	
Production	167.841
Distribution	105.963
Quality control	8.93
Electro- mechanical	12.461
Sewerage	10.344
Consumer's account	45.999
Administrative expenses	149.138
Provision for D/D	23.763
Right –up (stock)	0.0978
Provision for gratuity fund	-
Total Expenditures [B]	524.537
Operating surplus/deficit [A-B]	201.941
Interest payable	-61.756
Depreciation	-152.48
Depreciation transfer from capital reserved	47.715
Net loss	-35.422

**Income Statement has been formatted in P/L A/c shape.**

From the above table, we can say that actual profit of NT is more than budgeted profit, which means that the corporation has achieved more profit than the estimated by i) increasing the total income and ii) decreasing the total expenditure than the budgeted. This implies that the budgeted figure is vital for the actual performance. Or it provides the key points to improve the efficiency of management.

The analysis of Actual profit & loss A/C and actual profit & loss A/C of NWSC for F/Y 2064/65 shows that loss is incurred by Rs. 35.22 million. Even the profit before tax was Rs. 201.94 million

**Future Net profit Patterns:-**

The comparative profit/loss pattern of NWSC and NT for last five F/Y (059/60 to 064/65) and time series analysis for next five F/Y has been presented following table.

**Table No. 9**  
**Net Profit Pattern of NWSC and NT**

(Rs. In million)

NWSC				NT			
F/Y	Loss	F/Y	Forecast Overhead	F/Y	Profit	F/Y	Forecast Overhead
059/60	-30.67	065/66	-29.61	059/60	2045.47	065/66	5079.37
060/61	-47.73	066/67	-29.03	060/61	2570.27	066/67	5750.29
061/62	-4.57	067/68	-28.45	061/62	2588.22	067/68	6421.21
062/63	-42.91	068/69	-27.87	062/63	2048.14	068/69	7092.13
063/64	-35.42	069/70	-27.29	063/64	3230.47	069/70	7763.05
064/65	-28.53	070/71	-26.71	064/65	3904.31	070/71	8433.97
	- 189.83				16386.88		
Y=bX+ a	.58X - 31.93			Y= a + bX	2395.69+ 670.92X		

Table no. 9 shows that a i.e. y-intercept and b i.e. slope of trend line of net profit in NWSC was Rs. -31.93 and (058) million; and in NT was Rs. 2395.69 and Rs. 670.92 million respectively. Therefore,

Trend equation of net profit:

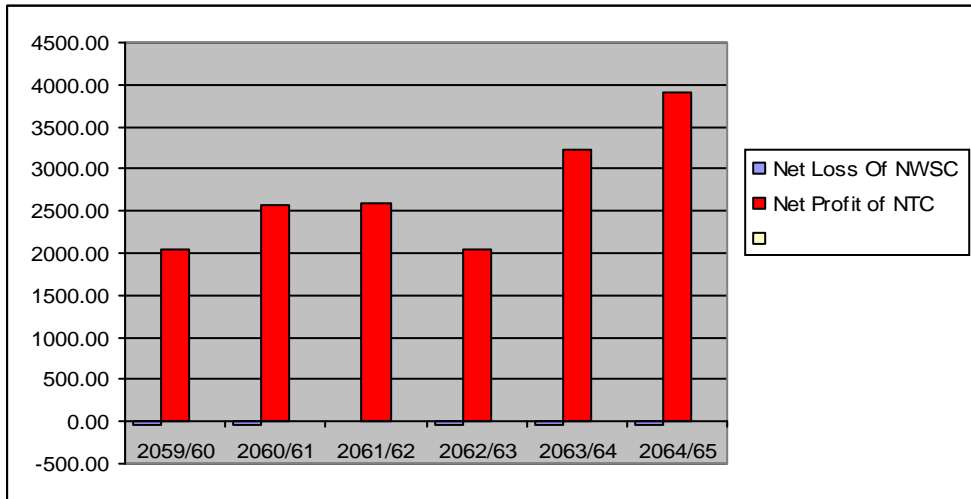
--For NWSC  $-31.93 + .58X$

--For NTC  $2395.69 + 670.92X$

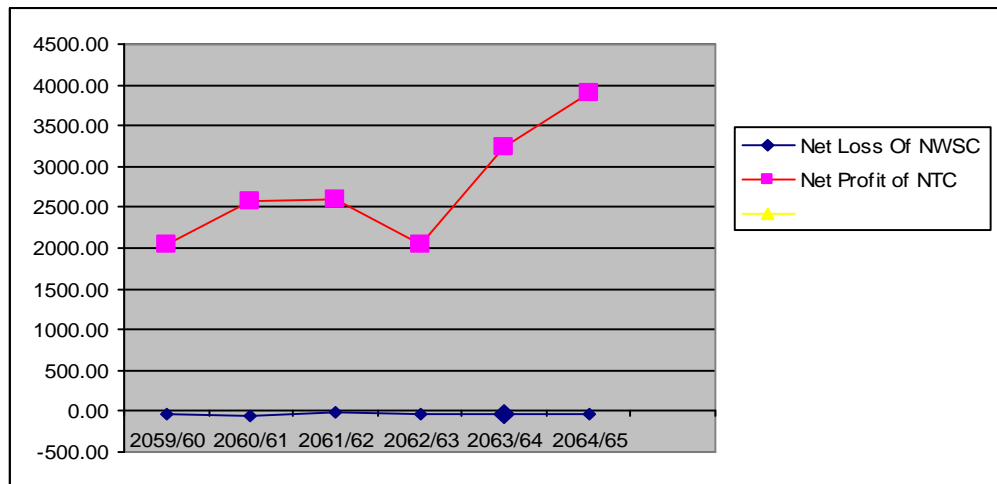
On the basis of trend equation obtained above the forecasted net profit for coming five years of NWSC would be in decreasing by Rs.58 million every year. As per NT trend equation forecasted net profit for coming five years would be in increasing trend.

Regarding NWSC the operating profit that is in minus figure is because of high administrative, repairs and maintenance and staff cost. These costs are to be controlled and the burden of huge amount of interest is to be reduced by following alternative measures.

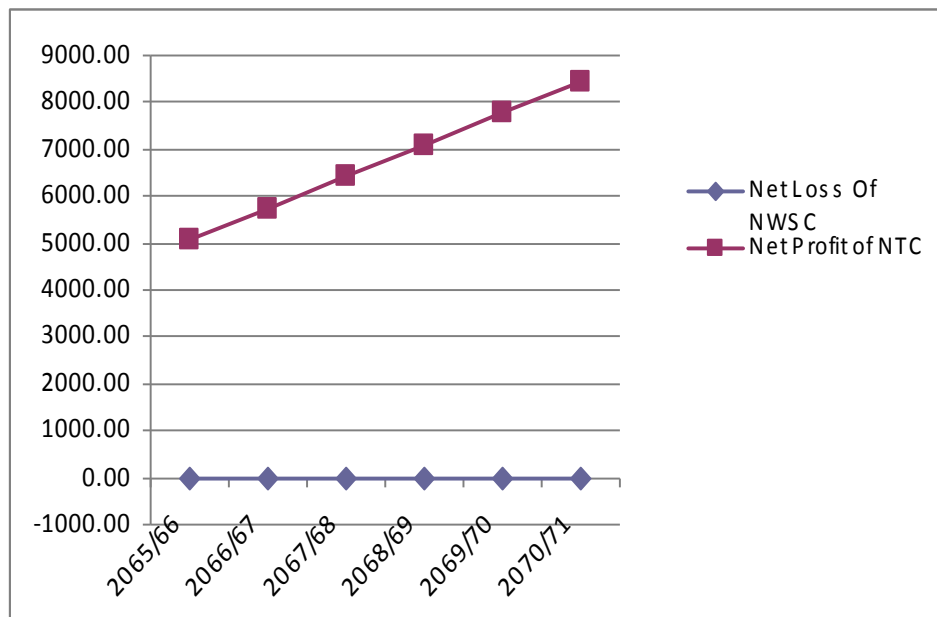
**Diagram No. 4**  
**Net Profit pattern of NWSC and NT.**



**Graph No. 5**  
**Net Profit pattern of NWSC and NT.**



**Graph No. 6**  
**Net Profit Trend of NWSC and NT**



#### **4.4 Balance Sheet:-**

Balance sheet is detail picture of a firm. It represents the firm's economic resources of obligations. Balance sheets communicate information about assets and liabilities of firm and overall all financial condition of a business at particular moment of time. It also indicates financial strength and weakness of the firm. It is prepared at the end of accounting period.

Total Fixed assets of NWSC include fixed asset, capital-work in progress and investment. Whereas total fixed assets of NT includes land, building, plant and machinery, heating & lighting, furniture, office equipment, vehicle, investment in Govt. securities, and Investment in Intel sat.

Total current assets of NWSC include inventories, Sundry debtors & other receivable, Cash & bank balances, prepaid and Loans & Deposits. Whereas total current assets of NT includes Stores & Spares Sundry debtors, interest accrued on investment, unexpired L/C & advances, Advances & Loans to employees, Branch Account, Bank A/C, Cash A/C.

Now worth of NT represent equally capital and Reserves surplus (i.e. Capital Reserve, Retained earning, sinking fund for repayment of loans), whereas Net worth of NWSC represent share capital, Reserves and Accumulated profits. Current liabilities of NWSC include sundry creditors and other payables, whereas current liabilities of NWSC include sundry creditors, interest accrued & dues, other liabilities, Deposits & Advances, Proposed dividend. The actual Balance sheet of NWSC and NT for F/Y 2064/65 is in presented in Table no. 9.

**Table No. 10**  
**Actual Balance Sheet of NWSC and NT**  
**(Rs. In million)**

Particulars	NWSC	NT
Total Fixed Asset	3233.00	16688.44
Total Current Asset	1481.59	22526.52
Differed Expenses	-	136.45
Total Asset	4714.59	39351.41
Total Equity & Reserve	3421.60	23686.03
Long Term Debt	992.42	
Current Liabilities and Provision	300.56	15665.38
Total Equity & Liabilities	4714.59	39351.41

**Table No. 11****Actual Summarized Balance Sheet of NWSC and NT for 2059/60 to 2064/65**

(Rs. In million)

Fiscal Year	059/60	060/61	061/62	062/63	063/64	064/65
Total Fixed Asset						
NWSC	2063.89	2109.61	2768.87	2756.57	2909.31	3232.99
NT	9263.79	10033.00	11425.25	13258.71	15023.57	16688.44
Total Current Asset						
NWSC	982.97	1077.91	1061.31	1141.26	1271.92	1481.59
NT	12320.60	15403.34	17229.87	17936.57	21167.49	22526.52
Total Differed Expenses						
NWSC						
NT	180.48	166.16	168.36	284.42	142.19	136.45
Total Asset						
NWSC	3046.86	3187.51	3830.18	3897.83	4181.23	4714.58
NT	21764.87	25602.50	28823.48	31479.70	36333.25	39351.41
Total Equity & Reserve						
NWSC	700.79	634.30	1150.70	1011.38	1527.24	3421.60
NT	14954.42	17525.13	18452.35	19526.33	21586.34	23686.03
Long Term Debt						
NWSC	1820.30	1894.49	1943.83	2041.18	1738.26	992.42
NT	952.35	299.90	233.78	11.25	24.24	
Current Liabilities and Provision						
NWSC	525.77	658.74	735.66	845.28	915.73	300.56
NT	5858.10	7777.47	10137.35	11942.12	14722.67	15665.38
Total Equity & Liabilities						
NWSC	3046.86	3187.52	3830.18	3897.83	4181.23	4714.58
NT	21764.87	25602.50	28823.48	31479.70	36333.25	39351.41

The summarized balance sheet of last 6 years of NWSC and NT is constituted in Table no.11

The liability side at balance sheet of study period of NWSC shows higher percentage of long term liabilities, upon which NWSC has been paying a huge amount of interest each year. Similarly, the asset shows the remarkable amount of accounts receivable and period, advances, loans and deposit. Instead of decreasing this account, it is being increased year by year.

The liability side of balance sheet of NT from F/Y 2059/60 to 2064/65 shows Capital Reserve and Retained earning with increasing trend and in Assets side Bank and Cash balance having increasing trend are huge proportion, which are kept ideally which is not a good sign. This shows that NT's financial structure is well structured.

#### **4.5 Cash Plan and Cash Flow Statement:-**

A budget shows the planned cash inflows, outflows and ending position by interim periods for a specific time span. Planning cash inflows and outflows gives the planned beginning and ending cash position for the budget period. Planning the cash inflows and outflows will indicate (1) the need for financing probable cash deficits or (2) the need for investment planning to put excess cash to profitable use. The cash budget is directly related to other functional plans, such as the sales plan, accounts receivable and the expenses budgets and the capital expenditures budget. A PPC program establishes the foundation for a realistic cash budget.

The cash flow statement consists of cash inflows and a cash outflow during the year. It omits the effect of non-cash activities like depreciation. This statement provides the necessary data of each and every cash flow activities and shows the closing balance of cash at the end of each year. The budgeted and actual cash flow statement of NT from the F/Y 2064/65 is presented in the following table.

Actual Cash Flow Statement for F/Y 2064/65 of NT is shown in Table no. 12 while Table no. 13 shows actual cash flow statement of NWSC for F/Y 063/64 and 064/65.

**Table No. 12**  
**Actual Cash Flow Statement of NT for F/Y 2064/65**

(Rs. In million)

Particulars	FY 2063/64	FY 2064/65
(I) Cash Flow From Operating Activities		
Net Profit before Tax	6,843.73	4,921.53
Adjustment	-	-
Depreciation	1,196.14	1,050.49
Differed expenses	40.03	40.82
Foreign Exchange Gain/ Loss	(280.01)	251.12
Provision for staff Bonus & Incentive	322.04	281.71
Provision for Pension & Gratuity	241.39	312.61
Interest on loan	1.11	0.70
Fixed Assets Written off -	-	1.22
Income from Investment & Bank Deposit	(596.84)	(463.83)
Expenses on lost of goods -	8.53	-
Royalty	591.81	491.30
Provision for earned leave	65.98	24.24
Operating Profit before Working Capital Changes	8,433.91	6,911.91
Adjustment for Working Capital Changes	-	-
Increase in account receivable	(273.55)	(157.00)
Increase in Stock	(34.26)	(54.61)
Decrease in Interest accrued	2.46	5.46
Increase in Advance-Tax	(1,684.60)	(1,602.05)
Decrease in Advance	382.51	221.48
Branch Account (adjust)	2.80	(4.04)
Increase in Payable	618.50	226.45
Payment of interest/Adjustment	(2.34)	0.47
Payment of Royalty	(370.64)	(450.00)
Payment of Earned leave	(22.01)	(21.02)

Payment of Pension	(30.05)	(23.61)
Gratuity Received -	0.01	-
Payment of Bonus & Incentive	(301.64)	(384.04)
Last year Adjustment	1.27	158.09
Working Capital Changes	(1,711.54)	(2,084.41)
Net Cash flow from Operating Activities (A)	6,722.36	4,827.50
(ii) Cash Flow From Investing Activities	-	-
Purchase of Fixed Assets	(2,243.65)	(1,997.75)
Decrease in cwip	15.79	(1,075.34)
Increase in differed expenses	(34.29)	(42.10)
Increase in investment	(818.21)	55.82
Income from Investment & Bank Deposit	596.84	463.83
Net Cash Flow from Investing Activities (B)	(2,483.52)	(2,595.53)
(iiI) Cash Flow From Financing Activities	-	-
Receipt in Long term Debt -	-	24.24
Payment of long term debt	(24.24)	(11.25)
Payment of dividend	(433.51)	(300.00)
Repayment of retained earnings to Nepal Govt.	(1,611.65)	(2,900.00)
Capital Reserve adjusted to retained earnings-	(2.32)	-
Net Cash Flow From Financing Activities (C)	(2,071.72)	(3,187.01)
Net Increase in Cash (A+B+C)	2,167.12	(955.04)
Cash at beginning	9,574.50	10,780.67
Foreign Exchange Gain/( Loss)	280.01	(251.12)
Cash at the end	12,021.62	9,574.50

**Table No. 13****Actual Cash Flow Statement of NWSC for F/Y 2064/65****(Rs. In million)**

Particulars	FY 2063/64	FY 2064/65
(I) Cash Flow From Operating Activities		
Net Profit(loss) from P/L Account	-42.91	-37.15
Provision for depreciation	151.72	152.52
Provision for interest	56.19	61.76
Provision for retirement fund	17.02	31.81
Provision for doubtful debt	11.05	13.13
Life insurance fund	4.63	4.10
Depreciation transfer	-47.72	-47.74
Capital release	0.78	0.10
Increase on receivable	-112.18	-131.32
Deposit ( increase) /decrease	-2.61	-0.13
Capital (increase) /decrease	-10.56	1.51
Current liabilities increase/(decrease)	17.78	5.50
Payment of Gratuity	-8.17	-6.62
Payment of life insurance	-2.70	-1.52
Net Cash flow from Operating Activities (A)	32.32	120.23
(ii) Cash Flow From Investing Activities		
Increase in fixed assets	-144.53	-140.84
Net Cash Flow from Investing Activities (B)	-144.53	-140.84
(iii) Cash Flow From Financing Activities		
Increase in share capital (JICA Grant)	-	0.11
Loan from Nepal Government	121.50	86.60
Increased in fixed capital	1.55	7.98
Net Cash Flow From Financing Activities (C)	123.06	94.69
Total cash flow increase (decrease)(A+B+C)	10.85	74.08
Opening cash balance	226.25	237.08
Closing cash balance	237.09	311.16

Source: Annual reports 2065.

In the Case of NT, The above table shows net cash inflows from operating activities are more than previous FY amount. An actual cash outflow from investing activities has increase than previous FY amount. Actual cash outflow from financing activities has increased than the previous FY amount.

In case of NT, Actual cash flow is prepared under indirect method. Net cash inflows from operating activities in F/Y 064/65 are more than from F/Y 063/64. Net cash outflow flows from investing activities in F/Y 064/65 are less than from F/Y 063/64. Net cash flow from financing activities are also less in F/Y 064/65 than F/Y 063/64.

Overall cash at the end of year is similarly more in F/Y 064/65 than that of F/Y 063/64.

### **Controlling Part**

#### **4.7 Performance Evaluation:**

Performance reporting for internal management uses is an important part of a comprehensive profit planning and control system. All companies regardless of their size have reporting requirements to show their overall performance.

Performance evaluation is an important phase of control process. Nepalese public enterprises have not a systematic and in depth approach to performance evaluation. NWSC and NT do not care of their performance. Various techniques and criteria can be used to evaluate performance of business enterprises.

This research report uses following evaluation techniques to measure the performances of NWSC and NT.

- i) Identification of cost variability and CVP analysis.
- ii) Flexible budget.
- iii) Variance Analysis
- iv) Financial Ratios.

Identification of Cost Variability:-

Knowledge of Cost behaviour is essential in cost planning and control. Cost behaviour poses a practical question as the output in a responsibility centre increase or decrease, what happens to each expense incurred in that center?

Fixed expenses are those expenses that are constant in total, from month to month, regardless of fluctuation in output or volume of work done.

Variable expenses are those expenses that change in total and changes with time or capacity. Directly with changes in output or volume of work done.

Those expenses that are neither fixed nor variable because they pose some characteristics of both are known as semi variable expenses.

Classification of cost unto fixed and variable is very important to plan and control the cost. It helps to determine the volume of operation desired to maintain profitability of the authority. NWSC and NT have not maintained any clear-cut boundaries about classification as fixed and variable cost. We have classified the cost into variable and fixed as per the information provided by the management of NT and NWSC.

The classified of expenses in fixed and variable as under.

**Table N. 14**  
**Cost Classification under Behaviour of NT**

Particular	Cost Classification according to behavior
Employee Cost	Fixed
Operational & Maintenance Cost	Variable
Lost on Foreign Exchange	Variable
Administration Cost	Fixed
Interest	Fixed
Depreciation	Fixed
Bonus	Fixed
Incentive Package	Fixed

**Table No. 15**  
**Cost Classification under Behaviour of NWSC**

Particular	Cost Classification according to behavior
Employee expense	Fixed
Repair and maintenance of pump and vehicle	Variable
Chemical	Fixed
Fuel	Variable
Power	Variable
Interest	Fixed
Depreciation	Fixed
Administrative expenses	Fixed

#### **4.6.1 Cost Volume Profit Analysis:-**

CVP is an analytical technique for studying the relationship between volume, cost, price and profit. It is a device used to determine the usefulness of the profit planning process of the enterprise. It helps to determine the minimum sales volume to eliminate losses and the sales volume at which the profit goal of the enterprise will be achieved. CVP analysis indicates the level where costs & revenue are in equilibrium. This tool is vital in profit planning because without the use of BEP, it is difficult to determine sales level for certain level of profit.

The CVP analysis of NT is based on the following assumptions:

- ) Based on P/L A/C of different Fiscal years.
- ) Actual base is selected in terms of sales revenue.
- ) Selling price, variable cost of volume ratio, and fixed cost per year are assumed to be remaining constant.
- ) Costs are classified as fixed & variable as presented in the following table.
- ) Miscellaneous income i.e. non-operating income is excluded from cost volume profit relationship.

**Table No. 16****Cost Classification and Actual Sales and BEP Analysis of NT****(Rs. In Million)**

Fiscal Year	059/60	060/61	061/62	062/63	063/64	064/65
Particulars						
Variable Cost :						
Operating and Maintenance	453.83	493.93	330.98	463.12	552.16	655.12
Loss/gain on Foreign Exchange	-207.99	-172.3	162	28.24	251.12	-280
Total Variable Cost	245.84	321.63	492.98	491.36	803.28	375.12
Fixed Cost						
Employee Cost	773.63	687.62	717.24	927.14	1136.8	1164.82
Administration Cost	577.4	611.5	752.63	798.52	835.24	921.32
Interest	211.05	106.79	97.52	89.54	57.25	63.98
Depreciation	799.5	825.95	931.26	1005.2	1048.6	1195.18
Total Fixed Cost	2361.5	2231.8	2498.65	2820.4	3077.9	3345.3
Actual Sales	5487.1	6159.0	7208.08	8312.2	8584.1	10413.6
Actual Profit	2879.7	3605.5	4216.45	5000.4	4702.9	6693.23

**Cost - Volume Profit (BEP) Analysis**

Fiscal Year	059/60	060/61	061/62	062/63	063/64	064/65
Particulars						
(I) Variable Cost Volume Ratio [Total VC/Total Sales]	0.04	0.05	0.07	0.06	0.09	0.04
(ii) Profit Volume Ratio [1-VC Ratio]	0.96	0.95	0.93	0.94	0.91	0.96

(iii) BEP ( In Rs - Million ) [ TFC/PV Ration ]	2472.35	2354.83	2682.09	2997.65	3395.70	3470.31
(iv) Margin of Safety [ Actual Sales - BEP Sales ]	3014.83	3804.19	4525.99	5314.57	5188.44	6943.34
(v) Margin of Safety Ration [ Margin of Safety /Actual Sales ]	0.55	0.62	0.63	0.64	0.60	0.67
(vi) Profit [ Margin of Safety × PV Ratio	2879.76	3605.53	4216.45	5000.41	4702.92	6693.23

**Summery**

Actual Sales	5487.18	6159.02	7208.08	8312.22	8584.14	10413.65
BEP Sales	2472.35	2354.83	2682.09	2997.65	3395.70	3470.31
Actual Profit	2879.76	3605.53	4216.45	5000.41	4702.92	6693.23
Profit under MOS	3014.83	3804.19	4525.99	5314.57	5188.44	6943.34
Difference In Profit [Profit under MOS - Actual Profit ]	135.07	198.66	309.54	314.16	485.52	250.11

**Table No. 17****Cost Classification and Actual Sales and BEP Analysis of NWSC****(Rs. In Million)**

Fiscal Year	059/60	060/61	061/62	062/63	063/64	064/65
Particulars						
Variable Cost :						
Power and fuel	78.931	98.931	102.925	104.038	116.83	116.83
Repair and Maintenance	93.467	97.963	86.617	94.341	98.063	98.063
Total Variable Cost	172.398	196.894	189.542	198.379	214.893	214.893
Fixed Cost						
Employee Cost	202.238	208.837	207.567	208.345	245.753	265.52
Chemical	6.715	8.114	10.135	10.412	7.609	8.08
Administration	30.276	32.688	44.261	45.451	32.165	37.26
Interest	31.957	48.115	52.22	56.188	61.756	64.25
Depreciation	95.398	102.286	108.385	127.58	152.48	166.24
Provision for bad debt	28.279	18.092	27.507	11.124	23.763	17.88
Total Fixed Cost	394.863	418.132	450.075	459.1	523.526	559.23
Actual Sales	424.61	438.02	511.95	539.95	706.1	736.24
Actual Profit	-142.65	-177.01	-127.67	-117.53	-32.32	-37.88
<b>Cost - Volume Profit (BEP) Analysis</b>						
Fiscal Year	059/60	060/61	061/62	062/63	063/64	064/65
Particulars						
(I) Variable Cost Volume Ratio [Total VC/Total Sales]	0.41	0.45	0.37	0.37	0.30	0.29
(ii) Profit Volume Ratio [1-VC Ratio]	0.59	0.55	0.63	0.63	0.70	0.71

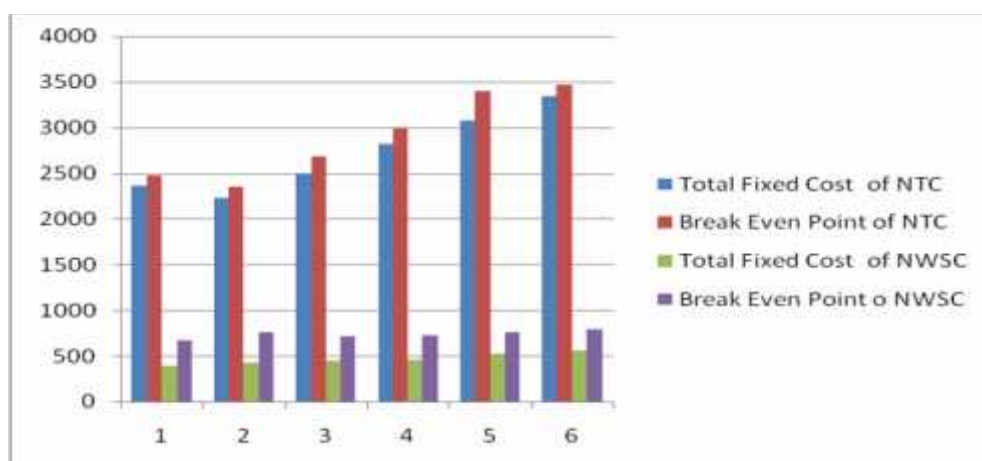
(iii) BEP ( In Rs - Million ) [ TFC/PV Ration ]	664.77	759.56	714.67	725.74	752.56	789.74
(iv) Margin of Safety [ Actual Sales - BEP Sales ]	-240.16	-321.54	-202.72	-185.79	-46.46	-53.50
(v) Margin of Safety Ration [ Margin of Safety /Actual Sales ]	-0.57	-0.73	-0.40	-0.34	-0.07	-0.07
(vi) Profit [ Margin of Safety × PV Ratio	-142.65	-177.01	-127.67	-117.53	-32.32	-37.88

**Summery**

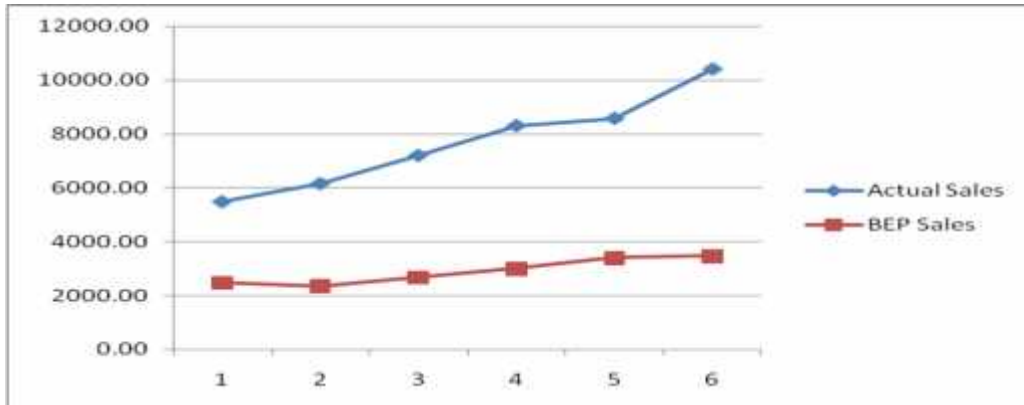
Actual Sales	424.61	438.02	511.95	539.95	706.10	736.24
BEP Sales	664.77	759.56	714.67	725.74	752.56	789.74
Actual Profit	-142.65	-177.01	-127.67	-117.53	-32.32	-37.88
Profit under MOS	-240.16	-321.54	-202.72	-185.79	-46.46	-53.50
Difference In Profit [Profit under MOS - Actual Profit ]	-97.51	-144.54	-75.05	-68.26	-14.14	-15.61

**Diagram No. 5**

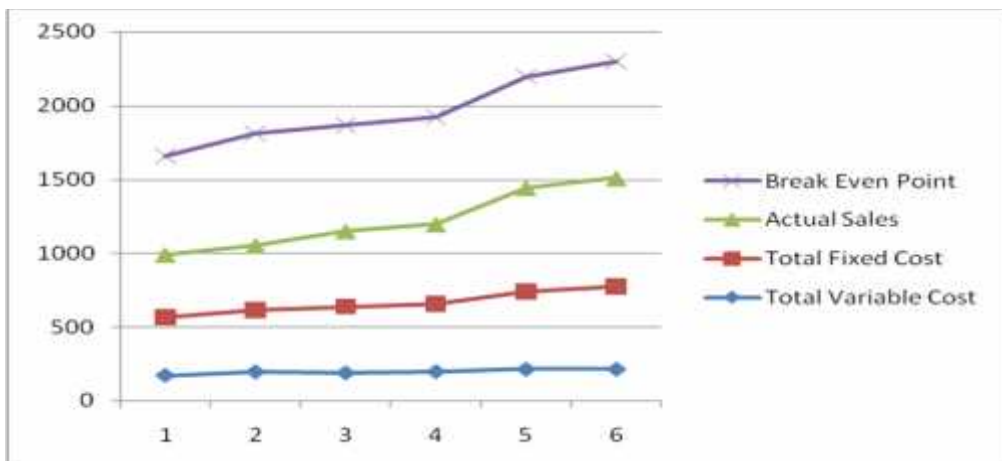
**Comparative Break Even Analysis of NWSC and NT**



**Graph No. 7**  
**Break Even Analysis of NT**



**Graph No. 8**  
**Break Even Analysis of NWSC**



The above table of NT shows that BEP is lower than sales in all fiscal years but NWSC has low sales than BEP. It indicates that the NT has operating above BEP in present cost structure and selling price but NWSC has not operating BEP Cost and selling Price. This table indicates that management of NT is very good from point of view of using CVP analysis. NT is in profit position from years. As BEP is increasing each year, it is not a good symptom for the corporation. The management should try to minimize the BEP as far as possible. The lower BEP, the higher will be the efficiency of the corporation.

The above table of NWSC shows that actual sales are lower than BEP sales in all fiscal year. It indicates that NWSC is operating below BEP in present cost structure. It further indicates that the position of NWSC in terms of cost volume profit analysis is not satisfactory. As BEP is increasing each year, it is not good symptom for the Corporation. It should try to minimize the BEP as far as possible. The lower the BEP, the higher will be the efficiency of the company. Management of NWSC must try to maintain its profit according to margin of safety and PV ratio.

#### 4.6.2 Flexible Budget:-

The basic concept of flexible budgets for expenses is that all expenses are incurred because of the passage of time, productivity level or combination of both time and activity level. A flexible budget estimates costs at different level of activity. By the help of flexible budget, a firm can determine the operation level by considering the cost and profit at different level of activity. At activity level of 90%, 100% and 110% what behaviour will show the cost and its impact on net income is shown in Table no. 30 for NT and in Table no. 31 for NWSC

**Table No. 18**  
**Flexible Budget of NT for FY 2064/65**

<b>(Rs. In Million)</b>			
Activity Level	90%	100%	110%
Sales Revenue	9372.29	10413.65	11455.02
Less: Variable Cost (3.6022% of Sales)	337.61	375.12	412.63
Contribution Margin	9034.68	10038.53	11042.38
Less: Fixed Cost	3345.30	3345.30	3345.30
Net Income before Tax	5689.38	6693.23	7697.08

**Table No. 19**  
**Flexible Budget of NWSC for FY 2064/65**

**(Rs. In Million)**

Activity Level	90%	100%	110%
Sales Revenue	662.62	736.24	809.86
Less: Variable Cost (29.19% of Sales)	193.40	214.89	236.38
Contribution Margin	469.21	521.35	573.48
Less: Fixed Cost	559.23	559.23	559.23
Net Income before Tax	-90.02	-37.88	14.25

Through NWSC and NT have not practice of preparing flexible budget, this budget for F/Y 2064/65 is prepared? Sales revenue has been assumed to remain constant. Similarly, variable cost per unit remains unchanged i.e. variable cost ratio of 3.6022% for NT And 29.19% for NWSC remains constant and total cost will remain constant. The above flexible budget of NT and NWSC both is prepared at different activity level from 90-110percent capacity utilization.

The above analysis done in above table shows that NWSC includes in huge variable and NT in Fixed cost. Maximum portion of fixed cost in both NWSC and NT includes administrative and office operation. These are to be controlled properly, which are obstacles to generate satisfactory operating profit. Thus NWSC and NT both should review its capital structure and has to follow cost control programmes in every cost center.

#### **4.6.3 Variance Analysis:-**

Comparison of actual result with planned or budget goals has been emphasized as an integral part of the control process. A basic feature of performance reports is the reporting of variance between actual results and planned or budgeted figures. A careful management study should be made to determine the underlying cause for significant variance.

Following step is taken while analyzing variance:-

- i) Standard should be developed for materials, labour, overheads, yields, sales and profits.
- ii) Comparison between actual result and standards should be made to find variance.
- iii) Causes should be analyzed and diagnosed as controllable and uncontrollable.
- iv) Responsibility and accountability should be assigned to related center and authorized personnel should be made accountable for controllable causes of unfavourable variance.
- v) Necessary corrective actions should be taken to improve unfavourable variances.

**Sales Variance:-**

The variance between budget and actual sales of NWSC and NT can be identified with help of following table.

**Table No. 20**  
**Computation of Sales Variance of NWSC and NT**

**(Rs. In Million)**

	NWSC					NT				
	Budget	Actual	Variance		Remarks	Budget	Actual	Variance		Remarks
F/Y			Amt	%				Amt	%	
059/60	424.61	421.61	-3.00	-0.71	Adverse	5550.40	5487.18	-63.22	-1.15	Adverse
060/61	438.02	462.59	24.57	5.31	Favorable	5724.63	6159.02	434.39	7.05	Favorable
061/62	511.95	513.33	1.38	0.27	Favorable	6558.26	7208.08	649.82	9.02	Favorable
062/63	539.95	530.81	-9.14	-1.72	Adverse	7865.30	8312.22	446.92	5.38	Favorable
063/64	706.10	662.41	-43.69	-6.60	Adverse	8358.65	8584.14	225.49	2.63	Favorable
064/65	736.24	683.85	-52.39	-7.66	Adverse	9547.82	10413.65	865.83	8.31	Favorable

The above table indicates that the sales variances of NWSC are unfavourable except in F/Y 060/61 and 061/62 during study period. Whereas NT sales variances are favourable except in F/Y 059/060 of research period.

The variance analysis seemed to be effective in NT but in NWSC seems to be very poor. Management of NWSC seemed to be neglecting the cause and effect of variance. NWSC should take corrective action in effect to avoid the harmful impact of unfavourable variance.

#### 4.6.4 Production Variance:-

The variance between budgeted and actual production of NWSC and NT can be identified with the help of following table:

**Table No. 21**  
**Computation of Production Variance of NWSC and NT**  
**(Rs. In Million)**

F/Y	NWSC					NT				
	Budget	Actual	Variance		Remarks	Budget	Actual	Variance		Remarks
			Amt	%				Amt	%	
059/60	75540	74095	-1445	-1.95	Adverse	41563	40647	-916	-2.25	Adverse
060/61	87240	88695	1455	1.64	Favorable	48630	52926	4296	8.12	Favorable
061/62	88670	90155	1485	1.65	Favorable	57680	67586	9906	14.66	Favorable
062/63	98576	98185	-391	-0.40	Adverse	75632	83567	7935	9.50	Favorable
063/64	107258	105680	-1578	-1.49	Adverse	83457	89659	6202	6.92	Favorable
064/65	114785	111586	-3199	-2.87	Adverse	90233	99587	9354	9.39	Favorable

The above table shows the fluctuating relation between budgeted production and actual production of NWSC. In F/Y 059/60, 062/63, 063/64 and 064/65 the budgeted production could not be translated into actual; Management should look after production process, control over power leakage/loss or revising the budgeted production. Management must diagnose the proper reason to control this variance.

In case of NT the above table shows the favourable production variance for all years except FY 059/60 under study. Budgeted production units are not very high than the actual produced unit. The budget should be based on the previous year's production. The corporation should not prepare sales budget on the trial and error basis, but should prepare on the basis of past trend and future possibilities.

#### 4.6.5 Overhead Expenses Variance:-

The variance between budgeted and actual overhead expenses of NWSC and NT is identified with the help of following table.

**Table No. 22**  
**Computation of Overhead Variance of NWSC and NT**  
**(Rs. In Million)**

F/Y	NWSC					NT				
	Budget	Actual	Variance		Remarks	Budget	Actual	Variance		Remarks
			Amt	%				Amt	%	
059/60	387	411.63	25	5.98	Favorable	2748	2815.41	67	2.39	Favorable
060/61	452	445.80	-6	-1.39	Adverse	2824	2715.79	-108	-3.98	Adverse
061/62	465	451.50	-14	-2.99	Adverse	2877	2956.35	79	2.68	Favorable
062/63	468	462.59	-5	-1.17	Adverse	3024	3125.36	101	3.24	Favorable
063/64	475	500.42	25	5.08	Favorable	3167	3256.87	90	2.76	Favorable
064/65	502	542.51	41	7.47	Favorable	3147	3289.64	143	4.34	Favorable

The above table shows NWSC has unfavourable overhead variance in fiscal year 060/61 to 062/63. The management should find out the reason for unfavourable variance. Each year's actual expenses are out of the limit of its budgeted expenses but in the F/Y 060/61, the budgeted expenses could cover the actual expenses.

In case of NT overhead variance is favourable throughout study period. This variance is satisfactory for NT.

After analyzing variances it can be concluded that there has not been developed the standard for various expenses. NWSC is failure to maintain its budget than NT.

#### 4.7 Financial Analysis:-

Ratio analysis is a widely used tool of financial analysis. The term ratio represents the numerical or quantitative relationship between two variables. Financial analysis is a tool used to know the performance of any enterprises. It presents the actual situation of the organization. It provides guidelines especially in spotting trend towards better or poor performance. Since financial efficiency is vital element to achieve the goals, the management should be aware of the current financial position. If present condition

can be assessed than the management can predict the future position. Corrective action can be taken to improve financial position. So it is very important for any enterprise to analyze its financial position with the help of Ratio Analysis.

#### 4.7.1 Current Ratio:

This ratio is an indicator of the firm's commitment to meet its short-term liabilities. It is expressed as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

This ratio helps to analyze the financial capacity to repay current debt.

**Table No. 23**  
**Current Ratio of NWSC and NT**

**(Rs. In Million)**

F/Y	NWSC			NT		
	Current Asset	Current Liabilities	Ratio	Current Asset	Current Liabilities	Ratio
059/60	982.97	525.77	1.87	12320.60	5858.10	2.10
060/61	1077.91	658.74	1.64	15403.34	7777.47	1.98
061/62	1061.31	735.66	1.44	17229.87	10137.35	1.70
062/63	1141.26	845.28	1.35	17936.57	11942.12	1.50
063/64	1271.92	915.73	1.39	21167.49	14722.67	1.44
064/65	1481.59	300.56	4.93	22526.52	15634.25	1.44
Total	7016.95	3981.724	12.62	106584.39	66071.96	10.16
Mean	1169.49	663.62	2.10	17764.07	11011.99	1.69
S.D	180.87	224.76	1.40	3735.87	3841.60	0.29
C.V	15.47	33.87	66.49	21.03	34.89	17.03
Combined S.D	1.01					
Calculated Value of /t/	-1.40					

Above table shows that current ratio of NWSC for the study period remained 1.87, 1.64, 1.44, 1.35, 1.39 and 4.93 respectively from the year 059/60 to 064/65. Mean of the ratio appeared to be 2.10 and C.V. appeared 66.49. Similarly the ratios of NT

corresponding period remained 2.10, 1.98, 1.70, 1.50, 1.44 and 1.44. Mean of the ratios came 1.69 whereas C.V. came 17.03.

Between two public utilities NWSC and NT, NT seems too efficient in maintaining the good liquidity position.

The calculated value of 't' (-1.40) remained very much lower than the tabulated value (2.306) at 5% level of significance. Hence null hypothesis has been accepted i.e. the mean of the current ratios of the sampled public utility does differ significantly.

#### 4.7.2 Total Debt Ratio:

This ratio shows the relationship between the long-term debt and total capital. Total capital includes the shareholder's equity as well as long-term debt. Total Debt. Ratio is also known as Debt to Total Capital Ratio. It is expressed as follows:

$$\text{Total Debt Ratio} = \frac{\text{Total Debt}}{\text{Capital Employed}}$$

This ratio is help to analyze the relationship between creditors fund and total capital.

**Table No. 24**  
**Total Debt Ratio of NWSC and NT**

(Rs. In Million)

F/Y	NWSC			NTC		
	Total Debt	Capital Employed	Ratio	Total Debt	Capital Employed	Ratio
059/60	1820.30	2051.77	0.89	952.35	14954.42	0.06
060/61	1894.49	2033.07	0.93	299.90	17525.13	0.02
061/62	1943.83	1987.25	0.98	233.78	18452.35	0.01
062/63	2041.18	1987.25	1.03	11.25	19526.33	0.00
063/64	1738.26	1988.85	0.87	24.24	21586.34	0.00
064/65	992.42	3421.60	0.29	0.00	23686.03	0.00
Total	10430.47	13469.784	0.83	1521.52	115730.60	0.01
Mean	1738.41	2244.96	0.831	253.59	19288.43	0.016
S.D	379.85	577.08	0.271	365.09	3074.66	0.024
C.V	21.85	25.71	32.63	143.97	15.94	154.47
Combined S.D	0.19					
Calculated Value of /t/	-2.45					

The above highlights that the ratio of NWSC remained 0.89, 0.93, 0.98, 1.03, .087 and 0.29 in the respective years of study period. Mean of the ratios came to be 0.83 and C.V to be 32.63. In the similar way of NT for the corresponding years remained 0.06, 0.02, 0.01, 0.00 and 0.00 Average of ratio was 0.016 and C.V. was 154.47%.

The ratio of NWSC (except F/Y 064/65) is in increasing trend whereas there is decreasing in NT.

The analysis makes it obvious that debt capital i.e. outsider fund was dominant in the capital structure of NWSC as reflected by higher mean ratio. C.V. of the ratios remained lower in NWSC, which indicates greater uniformity in the ratios of different years. Whereas NT with lower ratio is subjected to lower risk and this will in turn decrease the chance of getting higher return.

The calculated value of 't' came -2.45, which is less than the table value i.e. 2.306 at 5% level of significance. That's why null hypothesis has been accepted i.e. mean ratio two public utility sector differs significantly.

#### **4.7.3 Working Capital Turnover Ratio**

This is also known as working capital leverage Ratio. This ratio indicates whether or not working capital has been effectively utilized in making sales. In case a company can achieve higher volume of sales with relatively small account of working capital, it is an indication of the operating efficiency of the company. This ratio is calculated as follows:

$$\text{Working Capital Turnover Ratio} = \frac{\text{Net Sales}}{\text{Working Capital}}$$

The ratio helps to analyze the efficiency to generate sales and sales affect the earning.

**Table No. 25**  
**Working Capital Turnover of NWSC and NT**

(Rs. In Million)

F/Y	NWSC			NT		
	Sales	Working Capital	Ratio	Sales	Working Capital	Ratio
2059/60	421.61	1021.24	0.41	5487.18	7462.50	0.74
2060/61	462.59	1024.07	0.45	6159.02	7625.95	0.81
2061/62	513.33	1155.35	0.44	7208.08	8765.24	0.82
2062/63	530.81	1274.57	0.42	8312.22	9844.27	0.84
2063/64	662.41	1328.76	0.50	8584.14	10725.36	0.80
2064/65	683.85	1704.49	0.40	10413.65	12902.43	0.81
Total	3274.60	7508.48	2.63	46164.29	57325.75	4.82
Mean	545.77	1251.41	0.44	7694.05	9554.29	0.80
S.D	106.10	255.22	0.04	1790.72	2067.96	0.04
C.V	19.44	20.39	8.14	23.27	21.64	4.56
Combined S.D	0.04					
Calculated Value of /t/	35.03					

The above table shows that NT has been utilizing most efficiently its net working capital than NWSC as shown by higher mean ratio shows. By comparing C.V. of the ratios, it can be concluded that the ratios of NWSC for different 6 years varied considerably.

The calculated of 't' remained greater than the table value at 5% level of significance (35.03>2.306). That's why null hypothesis has been rejected i.e. working capital turnover ratio of the sampled public utility sector differs significantly.

#### **4.7.4 Total Fixed Assets:-**

This ratio indicates the extent to which the investments in fixed assets contribute towards sales. It compare with a previous period, it indicates the investment in fixed assets has been judicious or not. The ratio is calculated as follows:

$$\text{Total Fixed Assets Turnover ratio} = \frac{\text{Sales}}{\text{Total Fixed Assets}}$$

This ratio helps to analyze the efficiency with which the firm has been using its fixed assets to generate sales.

**Table No. 26**  
**Total Fixed Asset Turnover of NWSC and NT**

(Rs. In Million)

F/Y	NWSC			NT		
	Sales	Total Fixed Asset	Ratio	Sales	Total Fixed Asset	Ratio
2059/60	421.61	2063.89	0.20	5487.18	9263.79	0.59
2060/61	462.59	2109.61	0.22	6159.02	10033.00	0.61
2061/62	513.33	2768.87	0.19	7208.08	11425.25	0.63
2062/63	530.81	2756.57	0.19	8312.22	13258.71	0.63
2063/64	662.41	2909.31	0.23	8584.14	15023.57	0.57
2064/65	683.85	3232.99	0.21	10413.6	16688.44	0.62
Total	3274.60	15841.24	1.24	46164.2	75692.76	3.66
Mean	545.77	2640.21	0.21	7694.05	12615.46	0.61
S.D	106.10	462.08	0.02	1790.72	2902.46	0.02
C.V	19.44	17.50	7.74	23.27	23.01	3.84
Combined S.D	0.02					
Calculated Value of /t/	69.65					

The above table reveals that the ratios of NWSC remained 0.20, 0.22, 0.19, 0.19, 0.23 and 0.21 respectively. Mean and CV of the ratios seemed 0.21 & 7.74%. Accordingly the ratios in NT were maintained 0.59, 0.61, 0.63, 0.63, 0.57 and 0.62 respectively. Mean of the ratios was 0.61.

The ratio in NT depicted increasing trend while in NWSC decreased in 061/62 and gradually increased in the latter years nominally.

Increment in fixed asset turnover ratio indicates the improved work efficiency and FA has been effectively mobilized and good financial condition. Higher mean ratio of NT shows better utilization of FA than NWSC. CV analysis showed lesser uniformity in NT as against the NWSC.

The calculated value of  $t$  came much greater than tabulated value at 5% level of significance ( $69.65 > 2.306$ ). Therefore null hypothesis has been rejected i.e. difference noticed in the mean ratio of public utility sector is significant.

#### 4.7.5 Total Asset turnover Ratio;-

This ratio is employed to take information on total assets for generating sales in operation of business by the firm. It shows the relationship between total assets and sales. This ratio is calculated as follow.

$$\text{Total Asset turnover ratio} = \frac{\text{Sales}}{\text{Total Assets}}$$

The ratio reflects how well the company's assets are being used to generate its sales.

**Table No. 27**

#### **Total Asset Turnover of NWSC and NT**

(Rs. In Million)

F/Y	NWSC			NT		
	Sales	Total Asset	Ratio	Sales	Total Asset	Ratio
2059/60	421.61	3046.86	0.14	5487.18	21764.87	0.25
2060/61	462.59	3187.51	0.15	6159.02	25602.50	0.24
2061/62	513.33	1987.25	0.26	7208.08	28823.48	0.25
2062/63	530.81	3897.83	0.14	8312.22	31479.70	0.26
2063/64	662.41	4181.23	0.16	8584.14	36333.25	0.24
2064/65	683.85	4714.58	0.15	10413.65	39351.41	0.26
Total	3274.60	21015.265	0.98	46164.29	183355.21	1.51
Mean	545.77	3502.54	0.16	7694.05	30559.20	0.25
S.D	106.10	968.39	0.05	1790.72	6578.93	0.01
C.V	19.44	27.65	28.77	23.27	21.53	4.65
Combined S.D	0.03					
Calculated Value of $t$	8.86					

The above table shows ratios in NWSC & NT both are in fluctuating trend. Mean ratio of NTC appeared considerably higher which signifies that NT is more successful in utilizing the resources in revenue generating sector than NWSC.

Though sales revenue has increased each year, total assets has also increased. CV of the ratio depicted that the ratio remained more consistent in NT as compared to NWSC.

The greater calculated value of  $t$  is than the tabulated value at 5% level of significance i.e. 2.306. So the alternative hypothesis has been accepted i.e. public utility sector differ significantly with respect to this ratio.

#### 4.7.6 Capital Employed Turnover Ratio:-

A relationship between sales and total capital is represented by this ratio. It is a measure of efficiency of the capital employed in the business. The following formula we used for calculating this ratio:

$$\text{Capital Employed Turnover Ratio} = \frac{\text{Sales}}{\text{Capital Employed}}$$

This ratio indicates how many times capital has turned into sales.

**Table No. 28**

#### **Capital Employed Turnover of NWSC and NT**

**(Rs. In Million)**

F/Y	NWSC			NT		
	Sales	Capital Employed	Ratio	Sales	Capital Employed	Ratio
2059/60	421.61	2051.77	0.21	5487.18	14954.42	0.37
2060/61	462.59	2033.07	0.23	6159.02	17525.13	0.35
2061/62	513.33	1987.25	0.26	7208.08	18452.35	0.39
2062/63	530.81	1987.25	0.27	8312.22	19526.33	0.43
2063/64	662.41	1988.85	0.33	8584.14	21586.34	0.40
2064/65	683.85	3421.60	0.20	10413.65	23686.03	0.44
Total	3274.60	13469.784	1.49	46164.29	115730.60	2.37
Mean	545.77	2244.96	0.25	7694.05	19288.43	0.40
S.D	106.10	577.08	0.05	1790.72	3074.66	0.03
C.V	19.44	25.71	19.91	23.27	15.94	8.50
Combined S.D	0.04					
Calculated Value of $t$	12.02					

Higher mean ratio (0.40) in NTC means that NT has used capital more efficiently for income generating purpose than NWSC. NWSC has given less importance to this issue. NWSC has more non-performing assets i.e. idle asset. The consistency in the ratio was found higher in NT from the CV analysis.

This calculated value of  $t$  i.e. 12.02 remained greater than the tabulated value i.e. 2.306 at 5% level of significance, Hence null hypothesis has been rejected i.e. turnover of capital employed in terms of sales significantly differs between these two.

#### 4.7.7 Net Profit Ratio:-

This ratio measures the overall profitability of the firm by establishing relationship between net profit and sales. The relationship between net profit and sales indicates management's ability to operate the business with sufficient success not only to recover the cost of production, operating expenses of business and cost of borrowed fund but also to leave a margin of a reasonable compensation to the owners for providing their capital at risk. This ratio is calculated by dividing net profit after taxes and interest by sales and expressed as percentage of net sales as follows:

$$\text{Net Profit Ratio} = \frac{\text{Net profit after tax}}{\text{Sales}}$$

This ratio is a measure overall firm's ability to turn each rupee sales into profit.

**Table No. 29**  
**Net Profit Ratio of NWSC and NT**

(Rs. In Million)

F/Y	NWSC			NT		
	Net Profit/Loss	Sales	Ratio	Net Profit/Loss	Sales	Ratio
2059/60	-30.67	421.61	-0.07	2045.47	5487.18	0.37
2060/61	-47.73	462.59	-0.10	2570.27	6159.02	0.42
2061/62	-4.57	513.33	-0.01	2588.22	7208.08	0.36
2062/63	-42.91	530.81	-0.08	2048.14	8312.22	0.25
2063/64	-35.42	662.41	-0.05	3230.47	8584.14	0.38
2064/65	-28.53	683.85	-0.04	3904.31	10413.65	0.37
Total	-189.83	3274.6	-0.36	16386.88	46164.29	2.15
Mean	-31.64	545.77	-0.06	2731.15	7694.05	0.36
S.D	15.12	106.10	0.03	722.30	1790.72	0.06
C.V	-47.80	19.44	-54.89	26.45	23.27	16.21
Combined S.D	0.05					
Calculated Value of $t$	30.68					

The above table demonstrates the ratios in NWSC remained -0.07,-0.10, -0.01, -0.08, -0.05, and -0.04 in the respectively years of review period. Mean and CV of the ratios appeared (6%) and (54.89%). It means profitability position of NWSC remained quite poor; its average mean profit is in negative. The reason for loss may be insufficient operation or poor utilization of the resources.

NT has maintained the ratio as 0.37, 0.42, 0.36, 0.25, 0.38 and 0.37. Mean ratio 36% was considerably higher in NT, which signifies that the profitability position of the NT in relation this ratio is far better than that of NWSC. C.V. of the ratios in NWSC exceeded the same in NT by a large amount, which indicates that variability of the ratio in NWSC, was much higher.

The calculated value of  $t$  i.e. 30.68 was found greater than tabulated value at 5% level of significance. Hence null hypothesis has been rejected i.e. observed difference in the mean ratio of the sampled public utility is significant.

#### 4.7.8 Operating Profit Ratio:

Operating expenses ratio tries to established relation between operating cost and net sales. The information about the cost structure can be obtained from the operating expenses ratio. It is calculated as:

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Sales}}$$

**Table No. 30**  
**Operating Profit of NWSC and NT**

(Rs. In Million)

F/Y	NWSC			NT		
	Operating Profit	Sales	Ratio	Operating Profit	Sales	Ratio
2059/60	-47.25	421.61	-0.11	2080.26	5487.18	0.38
2060/61	-74.72	462.59	-0.16	2779.58	6159.02	0.45
2061/62	-19.28	513.33	-0.04	3285.19	7208.08	0.46
2062/63	10.05	530.81	0.02	3995.16	8312.22	0.48
2063/64	120.16	662.41	0.18	3654.29	8584.14	0.43
2064/65	128.36	683.85	0.19	5498.05	10413.65	0.53
Total	117.32	3274.6	0.08	21292.53	46164.29	2.72
Mean	19.55	545.77	0.01	3548.76	7694.05	0.45
S.D	85.92	106.10	0.15	1168.57	1790.72	0.05
C.V	439.40	19.44	1144.74	32.93	23.27	11.07
Combined S.D	0.11					
Calculated Value of $t$	13.92					

The higher ratio trends to better utilization of all resources. Mean Ratio of (45%) of NT shows the efficient condition of the organization. NWSC has very poor condition in this regard. More variability in NWSC is noticed and mean differs significantly between the two.

#### 4.7.9 Net profit To Total Fixed Asset Ratio:

This ratio shows the relationship between net profit and fixed assets. It indicates that utilization and contribution of fixed assets towards net profit. It is calculated as follow:

$$\text{Net profit To Total Fixed Asset Ratio} = \frac{\text{Net Profit before Interest and Tax}}{\text{Total Fixed Asset}}$$

The ratio measures the efficiency of the performing fixed asset.

**Table No. 31**  
**Net Profit to Total Fixed Asset Ratio of NWSC and NT**  
**(Rs. In Million)**

F/Y	NWSC			NT		
	NPBIT	Total Fixed Asset	Ratio	NPBIT	Total Fixed Asset	Ratio
2059/60	-110.69	2063.89	-0.05	2668.71	9263.79	0.29
2060/61	-144.32	2109.61	-0.07	3498.74	10033.00	0.35
2061/62	-75.45	2768.87	-0.03	4118.93	11425.25	0.36
2062/63	-61.34	2756.57	-0.02	4910.87	13258.71	0.37
2063/64	29.37	2909.31	0.01	4645.67	15023.57	0.31
2064/65	26.37	3232.99	0.01	6629.25	16688.44	0.40
Total	-336.06	15841.245	-0.15	26472.17	75692.76	2.07
Mean	-56.01	2640.21	-0.03	4412.03	12615.46	0.35
S.D	71.09	462.08	0.03	1354.89	2902.46	0.04
C.V	-126.93	17.50	-124.34	30.71	23.01	11.67
Combined S.D	0.04					
Calculated Value of /t/	35.41					

The above table shows that NT utilizes fixed asset in generating profit before interest and tax efficiently (35 % mean ratio). The trend moves toward satisfactory position.

The ratio of NWSC shows improver utilization of fixed asset in generating profit. More variability is noticed in NWSC and means ratio differs significantly.

#### 4.7.10 Return on Capital Employed Ratio:-

This ratio measures that relationship between capitals employed and net profit after tax. This ratio indicates how well the management has used the fund supplied by creditors and owners. This ratio can be calculated by using either of the following formula:

$$\text{Return on Capital Employed Ratio} = \frac{\text{Net profit after tax}}{\text{Capital Employed}}$$

Intangible asset includes goodwill, patents, trades mark, copyrights. Whereas capital employed means:

Equity and Preference share Capital + Reserves + P/L(Cr) + Share Premium + other undistributed profit + Debenture + Bond + Long term loan – non business assets i.e. investment in Gov. securities fictitious assets i.e. preliminary expenses & P/L (Dr) balance.

This ratio measures the overall effectiveness of management in producing profit by using total capital

**Table No. 32**  
**Return on Capital Employed Ratio of NWSC and NT**  
**(Rs. In Million)**

F/Y	NWSC			NT		
	Net Profit/Loss	Capital Employed	Ratio	Net Profit/Loss	capital Employed	Ratio
2059/60	-30.67	2051.77	-0.01	2045.47	14954.42	0.14
2060/61	-47.73	2033.07	-0.02	2570.27	17525.13	0.15
2061/62	-4.57	1987.25	0.00	2588.22	18452.35	0.14
2062/63	-42.91	1987.25	-0.02	2048.14	19526.33	0.10
2063/64	-35.42	1988.85	-0.02	3230.47	21586.34	0.15
2064/65	-28.53	3421.60	-0.01	3904.31	23686.03	0.16
Total	-189.83	13469.784	-0.09	16386.88	115730.60	0.84
Mean	-31.64	2244.96	-0.01	2731.15	19288.43	0.14
S.D	15.12	577.08	0.01	722.30	3074.66	0.02
C.V	-47.80	25.71	-54.97	26.45	15.94	14.22
Combined S.D	0.02					
Calculated Value of /t/	35.28					

The above table that ratio in NWSC for the respective years of the study period were - 0.01, -0.02, -0.00, -0.02, -0.02 and -0.01. Mean ratio appeared (1%) and CV appeared (54.97%). In the similar way, the ratio of NT remained 14%, 15%, 14%, 10%, 15%

and 16% in the corresponding years. Mean and CV of the ratios seemed 14% and 14.22% respectively.

In NWSC it remained negative for in all F/Y a study period. While in NT it was almost constant. Mean ratio of NT appeared much more than that of NWSC, which indicates, that the earning of the former with respect to the capital employed is appreciably high. Contrary to it, return on capital employed of NWSC appears unsatisfactory as per mean ratio. Higher CV of the ratios of NWSC signifies that lesser un-uniformity in the ratio.

The computed value of  $t$  came greater than the tabulated value at 5% level of significance ( $35.28 > 2.306$ ). Hence null hypothesis has been rejected i.e. probability position of two public utility sector to this ratio is significantly different.

To conclude after analyzing the financial ratios, it can be said that NT is better in every aspect of financial position than NWSC. NWSC must utilize the resources at maximum through systematic and pre-plan program.

#### **4.8 Major Findings:**

The above analysis of various functional budgets, their achievements, analysis of variance and the analysis of financial position of NWSC shows that NWSC is suffering from a number of internal and external problems in formulating and implementing profit plans in spite of its best effort. Though the formulation process of budget is satisfactory comparison to its committed resources, the achievement of NWSC is not encouraging. Despite this, NWSC is also suffering from operating loss due to heavy amount of fixed cost.

Following are the major findings have been drawn from the analysis:

- ❖ The NWSC and NT fail to maintain its periodic performance report systematically. Goals and objectives are known to high-ranking officials only.
- ❖ There exists unnecessary centralized decision-making and planning system. Lower level participation is not encouraged. It denotes the absence of MBO principle of management in the organization.
- ❖ Lack of coordination among various responsible departments.

- ❖ Inadequate planning of profits due to lack of skilled and purely academic manpower in budgeting section of enterprises. As well as inadequate authority and responsibility to planning department.
- ❖ Achievement of NWSC are more variable than budget in comparison of NT due to inadequate forecasting system.
- ❖ Failure in achievement due to inadequate evaluation of internal and external variable.
- ❖ NWSC suffering from high rate of power loss as sale is below than the production while NT fails to produce according to demand.
- ❖ Lack of dynamic and effective cost control programs as well as there is not separate costing department, and Responsibility Accounting System.
- ❖ Overheads are not classified systematically and it creates problems to analyze its expenses properly.
- ❖ Both enterprises are suffering from high fixed cost but NWSC has excessive.
- ❖ Due to high fixed cost Break even sales is high in context of sales Revenue in NWSC while P/V ratio 0.94 and average in NT is also unusually high.
- ❖ Flexible budget and variance analysis is completely ignored in both NWSC and NT.
- ❖ The financial ratios of NWSC are perfectly dissatisfactory in comparison to NT.
- ❖ There is a lack of entrepreneurship and commercial concepts in overall operation of the enterprises.

## CHAPTER -V

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary:-

The main objective of planning in business to increase the chances of making a profit. Business managers are continually involved in organizing, planning, and controlling the operation of both large and small business organizations. Profit planning is one of the most important management tool used to plan and control business operations.

The effective operation of a business concern resulting to the excess of income over expenditure fully depends upon as to what extent the management follows proper planning, effective coordination, and dynamic control.

Comprehensive profit planning and control or budgeting continuous to be of prime importance in virtually all organizations. Profit plans can be broadly divided into two groups as functional plan and financial plan. Functional plans include sales plan, production plan, raw materials plan, direct labour plan, and expenses plan. Financial plan includes cash flow plan, capital plan expenditure plan, projected income statement, and projected balance sheet.

Time dimension is another important consideration in profit planning. Profit plans are prepared for two time dimensions, strategic long range plan for 5 or 7 years and tactical short range plan for a year detailed by interim periods.

Profit planning is an artistic work. The formats of profit planning or budgeting are neither predetermined nor rigid. These vary with the nature of data, size of transactions, and the persons who develops the formats. Thus, it should be neat, clean, clear and comprehensive.

Having prepared a plan, it is equally important to implement effectively and to watch performance. Difference between actual results and the budgeted may rise to indicate the necessity for correction so as to assure the realization of the forward plan.

Effective profit planning requires support of top management, accurate accounting, continuous budget education, degree of flexibility, full communication, realistic exceptions, etc.

Nepal is predominantly an agricultural country. Industrialization is still in its infancy with many major areas under public sector management. Industrialization sector have contributed 10%, and more than 80% of the people still depend on agriculture for their livelihood.

It is sure that most developing countries need to make fairly extensive use of public enterprises as a catalytic agent in the process of moving certain stage in the development process. Public enterprises in Nepal constitute a vital instrument for the socio-economic development of our country.

Nepal Bank limited, a commercial bank was the first public enterprise to have separate public entity in Nepal. Since then, a number of PEs has been established. Performance of PEs in Nepal has remained poor.

The perception of the government and its role in public welfare has helped to establish public enterprises engaged in public utilities. Role of the government owned enterprises is supposed to be undermined in the present context of worldwide privatization, liberalization and globalization. But in developing country like Nepal where private sector is not strong and in sound position to provide public utilities to the people, public utility concern's role cannot be undermined.

Most of the Nepalese public enterprises are facing the ambiguity upon their goals and objectives. However lower level management's perception and participation both are ignored by most of the PEs in developing plans, goals, objectives and strategies. There is the lack of proper coordination and communication has no commitment on the goals and objectives of the organization. Likewise planners are having no proper skill and technique to develop various functional budgets.

The present study has examined the application of profit planning in Nepalese public utility sectors. Nepal water Supply Corporation and Nepal Telecommunication Corporation (Now converted into Company) have been taken as representative public enterprises in Nepalese public utility sector. Nepal Telecommunication Corporation

was established on 2032-3-1 B.S. under Nepal Telecommunication act 1971 to provide reliable and affordable telecommunication service all over the country. NT is a Govt. owned corporation. It is exerting its almost efforts to provide communication services to larger sector of population.

NT has already installed 6, 17, 919 line and distributed about 5, 59,428 and there is immediate need for provisioning of additional 3, 00,000 telephone line, keeping in view the list of waiters.

Nepal water supply corporation (NWSC) the state owned entity which is the prime supplier of drinking water in the country was established in 2046 BS under the NWSC Act 2046 to regulate the drinking water supply for the community and to construct, manage and control of sewerage system in the country.

The study intends to analyze and examine the practice of profit planning in NT and NWSC. The study tries to answer the questions like, what is the overall trend of profit planning in NT and NWSC. What are the major problems and issues relating to development of profit plan? The significance of the study is really on the examination that whether the NT and NWSC are applying profit planning system properly or not. The general objectives of this study are to analyze the profit planning and control tools adopted by NT and NWSC; the evolution of the variance between the targeted and the actual of both public utility and the assessment of the financial performance of NT and NWSC using BEP analysis and ratio analysis. The study covers the analysis of only five year's (fiscal years 059/60 to 064/65) annual report. The study has been divided into five different chapters: introduction, review of literature, Research methodology, presentation and analysis of data, and Summary, Conclusion & recommendations.

## **5.2 Conclusion:-**

Analyzing in details the present practice of profit planning process in NWSC and NT, this study concludes the following:

- ) NWSC and NT have not adequately considered controllable and non-controllable variable affecting the company. Furthermore, they have no in depth analysis of the company's strengths and weakness.

) Objectives of Nepalese public enterprises are not clear. Conflict between social objectives and profit objectives are hindering to profit planning program of PEs.

a) NWSC and NT have not any effective program to increase profitability but these enterprises have a number of social objectives to create and maintain an optimum enterprises environment that maximize the interest and motivation of all employees.

b) There is no well-developed system of performance evaluation for employees. No fair system of reward and punishment to employees on the basis of their work performance. No programs have been assigned to create fair working environment.

c) These companies have no any broad objectives to operate with a positive and dynamic philosophy of management, which is vital to a competitive and growing company.

Furthermore these companies have no any major programs to accomplish formulated objectives and implement continuously and it consistently so as to increase the expertise of management at all levels and to take full advantage of the latest technique and innovations as they are developed.

) Planning department of NT and NWSC does not have any authority to decide and create new ideas while formulating various plans. Basically few higher-level officials formulate plans, participatory decision-making is not considered necessary in the corporation.

) Redtops are another main obstacle in decision-making and implementation of plans and programs. Every function requires unnecessary formalities, which creates delay in decision making and functioning.

) Nepalese public enterprises lack budgeting experts and skilled planners. Plans are formulated on traditional adhoc basis.

) NWSC and to some extent NT are not efficiently able to adopt new technological advancement. That's why the cost of production are too high than they should be.

) Sales plan achievement is satisfactory in NT. NT has not practiced to prepare long-term sales plan. But in NWSC, sales achievements are below than sales

targets. This signals that sales plans are not made by considering all components which affecting sales.

- ) Pricing system of Public utility sector is not scientific. PEs adopts traditional pricing methods. Usually, cost-plus pricing method is applied to determine price. Certain products are priced below costs as per HMG circular.
- ) NWSC and NT have not a practice of systematic forecasting. Sales forecasts are made with previous sales figures and production capacity. This shortcoming is due to lack of skilled experts.
- ) Cost-volume-profit relationship has not been considered while developing the sales plans; fixed assets purchase plan and pricing strategy. As BEP is increasing each year, it is not a good symptom for the corporation.

### **5.3 Recommendations:**

On the basis of the comparative study of profit planning in Nepal Water Supply Corporation and Nepal Telecommunication Corporation as representative public utility sectors, it seems necessary to develop, implement and improve the process and profit planning in these public enterprises from the very beginning to the end. Assuming these two enterprises as the representative public utilities following keys can be recommended to improve the development and implementation of profit plans.

1. All PEs should adequately identify and evaluate the internal and external variable, which has influences on the enterprises. These enterprises should have in- depth analysis of company's strength and weakness.
2. Objectives are the ends, which an enterprise seeks to achieve. So objectives are the basic guidelines of the enterprises. Nepalese public enterprises should clearly define their broad objectives. NWSC and NT should develop the objectives to create the maintain an optimum enterprise environment that maximize the interest and motivation of all employees.
3. NWSC and NT should have major programs to accomplish formulated objectives and to implement them continuously and consistently to increase the levels of performance and to take full advantage of the latest techniques and innovations as they are developed.
4. NWSC and NT should decide to develop effective program to expand growth rate. Both NWSC and NT should adopt participatory management policy as

well as Management by Objective (MBO), so as to make the employees feel they are working for their own company.

5. There should be continuous flow of information among various level of management and various group of employees. The goal, objectives, strategies should be carefully communicated to lower level management. These enterprises should maintain proper coordination within the organization. Line and staff authorizes and responsibilities should be clearly defined.
6. The theoretical formula for production as well as stable production policy except un-usual cases should be considered, if possible.
7. In NWSC leakage of drinking Water should be controlled. For this, meter reading and meter joining system should be controlled. The most important aspect is to motivate its employees who engaged in transmission and distribution line to control the leakage. Rules and regulations should be strictly implemented to control the leakage and those staffs who are themselves engaged in encouraging power leakage should be investigated and strictly be demoralized. NT should decide to develop effective program to expand its production growth rate.
8. They should develop their overhead budget in a well- classified and scientific way. Expenses related to production should be included in manufacturing budget. Similarly office and administrative; selling and distribution overhead should be classified systematically; All overhead budgets should be evaluated on the basis of achievement.
9. Classification of an expense item as controllable and non-controllable must be made with in a specific framework of responsibility.
10. Management of NWSC and NT should attack costs in several ways, such as cost reduction programs, cost planning, and continuous attention to cost-incurring decisions.
11. When developing the tactical profit plan the expenses for each responsibility center should be carefully assessed. After the production plan has been completed expense budgets should be developed for each responsibility centre in the organization.
12. Capital expenditures should be planned in advance and discounted cash flow techniques should be applied to evaluate the proposals.

13. Programs to improve the employee productivity should be made effective. Incentive plan to raise employee morale and motivation should be developed. Employees should be rewarded and punished on the basis of their work performance. An extra amount with fixed salary on the basis of their productivity may be applied to motivate the personnel.
14. Policy to finance the cash deficit and to utilize excess funds should be formulated.
15. Profit is the difference between revenue and cost. Higher is the difference greater will be profit, such difference may happen in the following condition.
16. Increase in income, cost remaining the same.
17. Decrease in cost, income remaining the same.
18. Increase in income, decrease in cost.
19. Higher increase in income, than increase in cost.
20. Higher decrease in cost than decrease in income.
21. To increase the Profit of NWSC:-
22. NWSC must follow the immediate measure to control staff cost and operation, maintenance and administrative cost. Though the operation of NWSC is expanded, it should be inclined to control these expenses. Appointment of staff under political recommendation, unnecessary expenses in the name of office management and other recreation and refreshment expenses should be avoided. And overstaffing should be discouraged.
23. Finally, a systematic approach to comprehensive profit planning is essential to be adopted in the public enterprises in Nepal. To adopt this approach, planning experts should be hired or existing planners should be trained. Implementation of profit planning program can considerably contribute to increase profit or to eliminate loss of Nepalese public enterprises.
24. Although profit needs to be earned for survival and growth of any institution, it should not be the one and the only one goal. The country has expected form PEs in such a way that it encompasses the balance development. Economic Level of the country can be raised only when the level of the people deepening upon the agricultures increased.

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## APPENDIX – 1

### STATISCAL CALCULATION

#### Budgeted Sales and Actual Sales of NTC

(A) Calculation of Achievement, Mean, Standard Deviation and Co-efficient of Variation.

Sales Budget and Achievement (Rs. in Million)s

F/Y	Budget (X)	Actual (Y)	Ach (%)	$(X - \bar{X})$	$(X - \bar{X})^2$	$(Y - \bar{Y})$	$(Y - \bar{Y})^2$
2059/60	5550.40	5487.18	98.86	-1717.11	2948466.752	-	4870267.841
2060/61	5724.63	6159.02	107.59	-1542.88	2380478.694	-	2356311.984
2061/62	6558.26	7208.08	109.91	-709.25	503035.5625	-485.97	236165.221
2062/63	7865.30	8312.22	105.68	597.79	357352.8841	618.17	382136.2095
2063/64	8358.65	8584.14	102.70	1091.14	1190586.5	890.09	792263.1751
2064/65	9547.82	10413.65	109.07	2280.31	5199813.696	2719.60	7396233.225
Total	43605.06	46164.29	633.81		12579734.09		16033377.66

Let X and Y are the budgeted Sales and actual Sales respectively:

$$(i) \text{ Achievement (\%)} = \frac{\text{Actual Sales (Y)}}{\text{Budget Sales (X)}}$$

$$\text{For FY 2059/60} = \frac{5487.18}{5550.40} = 98.86\%$$

$$\text{For FY 2064/65} = \frac{10413.65}{9547.82} = 109.07\%$$

(ii) For Budgeted Sales:

$$\text{a. Mean } (\bar{X}) = \frac{\Sigma X}{N} = \frac{43605.06}{6} = 7267.51$$

$$\text{b. Standard Deviation } (\sigma) = \sqrt{\frac{\Sigma (X - \bar{X})^2}{n}} = \sqrt{\frac{12579734.09}{6}} = 1447.97$$

$$\text{c. Co-efficient of Variation (C.V)} = \frac{\sigma}{\bar{X}} \times 100 = \frac{1447.97}{7267.51} \times 100 = 19.92 \%$$

(iii) For Actual Sales:

$$\text{a. Mean } (\bar{Y}) = \frac{\Sigma Y}{N} = \frac{46164.29}{6} = 7694.05$$

$$\text{b. Standard Deviation } (\sigma) = \sqrt{\frac{\Sigma (Y - \bar{Y})^2}{n}} = \sqrt{\frac{16033377.66}{6}} = 1634.69$$

$$\text{c. Co-efficient of Variation (C.V)} = \frac{\sigma}{\bar{Y}} \times 100 = \frac{1634.69}{7694.05} \times 100 = 21.25 \%$$

(B) Calculation of Combined Standard Deviation and 't' Test

F/Y	Ach(%) of NWSC (X)	$(X - \bar{X})^2$	Ach(%) of NTC (Y)	$(Y - \bar{Y})^2$
2059/60	99.29	0.87	98.86	45.88
2060/61	105.61	52.51	107.59	3.82
2061/62	100.27	3.64	109.91	18.27
2062/63	98.31	0.00	105.68	0.00
2063/64	93.81	20.70	102.70	8.62
2064/65	92.88	30.01	109.07	11.79
Total	98.36	17.96	105.63	14.73

$$\text{Here, Arithmetic Mean } (\bar{X}_1) = \frac{\Sigma X}{N_1} = \frac{98.36}{6} = 16.39$$

$$\text{Arithmetic Mean } (\bar{Y}_1) = \frac{\Sigma Y}{N_2} = \frac{105.63}{6} = 17.60$$

$$\text{Standard Deviation (S.D) } (\sigma_X) = \sqrt{\frac{\Sigma (X - \bar{X})^2}{n}} = \sqrt{\frac{17.96}{6}} = 1.73$$

$$\text{Standard Deviation (S.D) } (\sigma_Y) = \sqrt{\frac{\Sigma (Y - \bar{Y})^2}{n}} = \sqrt{\frac{14.73}{6}} = 1.57$$

$$\text{Co-efficient of Variation (C.V}_X) = \frac{\sigma_X}{\bar{X}_1} \times 100 = \frac{1.73}{16.39} \times 100$$

$$= 10.55 \%$$

$$\text{Co-efficient of Variation (C.V}_Y) = \frac{\sigma_Y}{\bar{Y}_1} \times 100 = \frac{1.57}{17.60} \times 100$$

$$= 8.92 \%$$

Combined Standard Deviation (Combined S.D):

$$S = \sqrt{\frac{\Sigma(X - \bar{X})^2 + \Sigma(y - \bar{y})^2}{n_1 + n_2 - 2}} = \sqrt{\frac{17.96 + 14.73}{6 + 6 - 2}}$$

$$= 1.81$$

$$\text{Calculated Value of ('t' test):} = \frac{\bar{X} - \bar{Y}}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} = \frac{16.39 - 17.60}{1.81 \sqrt{\frac{1}{6} + \frac{1}{6}}}$$

$$= \frac{1.21}{1.81 \times .0577} = 3.47$$

(C)Calculation of KARL PEARSON'S Co-efficient of Correlation and Probable Error of Coefficient of Correlation of NTC

F/Y	Budget (X)	Actual (Y)	XY	X <sup>2</sup>	Y <sup>2</sup>
2059/60	5550.40	5487.18	30456043.87	30806940.16	30109144.35
2060/61	5724.63	6159.02	35258110.66	32771388.64	37933527.36
2061/62	6558.26	7208.08	47272462.74	43010774.23	51956417.29
2062/63	7865.30	8312.22	65378103.97	61862944.09	69093001.33
2063/64	8358.65	8584.14	71751821.81	69867029.82	73687459.54
2064/65	9547.82	10413.65	99427655.74	91160866.75	108444106.3
Total	43605.06	46164.29	349544198.80	329479943.69	371223656.19

Karl Pearson's Co-efficient of Correlation (r)

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{[6 \times 349544198.80] - [43605.06 \times 46164.29]}{\sqrt{[6 \times 329479943.69] - [43605.06]^2} \sqrt{[6 \times 371223656.19] - [46164.29]^2}}$$

$$= \frac{84268557.47}{85211751.47}$$

$$= 0.9889$$

Probable Error of Co-efficient of correlation:

$$P.E (r) = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - (.9889)^2}{\sqrt{6}} = \frac{0.0149}{2.45} = .006$$

(D) Calculation of Least Square Linear Trend of Sales of NTC

F/Y	Actual Sales (Y)	X	X <sup>2</sup>	XY	F/Y		Y <sub>C</sub> = a + bX
2059/60	5487.18	-3	9	-16461.54	2065/66	4	10656.02
2060/60	6159.02	-2	4	-12318.04	2066/67	5	11396.51
2061/62	7208.08	-1	1	-7208.08	2067/68	6	12137.00
2062/63	8312.22	1	1	8312.22	2068/69	7	12877.50
2063/64	8584.14	2	4	17168.28	2069/70	8	13617.99
2064/65	10413.65	3	9	31240.95	2070/71	9	14358.48
Total	46164.29		28.00	20733.79			

Here,

$$A = \frac{\Sigma Y}{N} = \frac{46164.29}{6} = 7694.05$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{20733.79}{28} = 740.49$$

**Annex**  
**of**  
**NWSC & NTC**

**Profit and Loss Account for FY 2064/65**(Rs. In million)

Particulars	Amount
<b>Income:</b>	
Sales	662.41
Other income	64.068
Total income [A]	723.478
<b>Expenditure:</b>	
Production	167.841
Distribution	105.963
Quality control	8.93
Electro- mechanical	12.461
Sewerage	10.344
Consumer's account	45.999
Administrative expenses	149.138
Provision for D/D	23.763
Right –up (stock)	0.0978
Provision for gratuity fund	-
Total Expenditures [B]	524.537
Operating surplus/deficit [A-B]	201.941
Interest payable	-61.756
Depreciation	-152.48
Depreciation transfer from capital reserved	47.715
Net loss	-35.422

**Balance Sheet for FY 2064/65(Rs. In million)**

Particulars	NWSC
Total Fixed Asset	3233.00
Total Current Asset	1481.59
Differed Expenses	-
Total Asset	4714.59
Total Equity & Reserve	3421.60
Long Term Debt	992.42
Current Liabilities and Provision	300.56
Total Equity & Liabilities	4714.59

**Balance Sheet**

FY	2059/060	2060/061	2061/062	2062/063	2063/064
Particulars					
<b>Capital and Liabilities</b>					
Share capital and fund	1346.042	1371.042	1371.042	1371.042	3437.775
Capital reserve	705.728	662.023	616.206	617.357	521.363
Long term loan	1820.303	1894.485	1943.828	2041.175	992.42
Current liabilities	525.767	658.735	735.655	845.277	-
Total	4397.84	4586.285	4666.732	4874.852	4951.558
<b>Assets and Properties</b>					
Fixed Assets	2063.891	2109.607	2768.87	2756.571	2909.313
Work in progress	1051.352	1154.557	483.281	511.229	323.688
Total (A)	3115.243	3264.164	3252.15	3267.8	3233.001
<b>Current Assets</b>					
Receivables	465.105	550.792	576.346	687.437	818.004
Advance & deposit	38.971	26.639	34.293	36.537	36.771
Life insurance fund	7.5	9.248	13.74	15.673	18.249
Stock inventories	309.282	311.194	290.637	296.395	297.139
Bank & Cash balance	257.047	163.435	226.245	235.877	311.413
Total(B)	1077.905	1061.308	1141.261	1271.92	1481.586
Accumulated loss total(C)	204.688	260.812	273.319	335.132	236.97
Total (A+B+C)	4397.84	4586.285	4666.731	4874.852	4951.558

**Profit and Loss A/C**

FY	2059/060	2060/061	2061/062	2062/063	2063/064
Particulars					
Income:					
Sales	421.619	462.593	513.33	530.814	662.41
Other income	65.049	71.414	69.377	68.081	64.068
Total income	486.668	534.007	582.707	598.895	723.478
Expenditure:					
Production	136.992	149.797	147.531	157.519	167.841
Distribution	87.931	101.374	93.859	102.723	105.963
Quality control	5.887	6.168	8.208	5.455	8.93
Electro- mechanical	12.738	16.188	10.871	12.47	12.461
Sewerage	13.613	12.843	10.381	10.724	10.344
Consumer's account	38.278	40.087	40.403	43.654	45.999
Administrative expenses	115.24	119.346	114.831	113.645	149.138
Provision for D/D	28.28	18.093	27.508	17.636	23.763
Right –up (stock)	-	-	0.688	0.775	0.0978
Provision for gratuity fund	-	14.919	20	17.018	-
Total	438.959	478.815	474.289	481.619	524.537
Operating surplus/deficit	47.709	55.191	108.418	117.276	201.941
Interest payable	-31.957	-48.115	-52.22	-56.188	-61.756
Depreciation	-95.415	-102.286	-108.385	-151.716	-152.479
Depreciation transfer from capital reserved	49.002	47.478	47.608	47.715	47.715
Net profit/loss	-30.661	-47.732	-4.57	-42.913	-35.422
Last year adjustment	-4.955	-8.783	-7.937	42.115	1.448
Up to previous year (net loss)	-169.06	-204.677	-260.812	-273.319	-274.117
Accumulated loss carried to B/S	-204.677	-260.812	-273.319	-274.117	-237.247

## TABLE OF CONTENTS

	<b>Page No.</b>
Recommendation	i
Viva-Voce Sheet	ii
Declaration	iii
Acknowledgements	iv
Table of Contents	v
List of Tables	viii
List of Diagrams/Graphs	ix
Abbreviations	x
<b>CHAPTER-I: INTRODUCTION</b>	<b>1-10</b>
1.1 General Background .....	1
1.1.1 Public Enterprises .....	2
1.1.2 Introduction of NWSC .....	3
1.1.3 Introduction of the Nepal Telecom .....	4
1.2 Statement of the problem .....	6
1.3 Objectives of the study.....	7
1.4 Significance of the study.....	8
1.5 Limitations of the study .....	8
1.6 Chapter Plan.....	9
<b>CHAPTER-II: REVIEW OF LITERATURE</b>	<b>11-58</b>
2.1 Conceptual Framework.....	11
2.1.1 Fundamental of Profit Planning and Control .....	18
2.1.2 Managerial Evaluation of Alternatives in Planning.....	24
2.1.3 Profit Planning and Control Process .....	25
2.1.4 The Profit Planning and Control Manual.....	29
2.1.5 Line and Staff Responsibilities Related to Profit Planning and Control ....	29
2.1.6 Purpose of Profit Planning and Control:-.....	30
2.1.7 Foundation of PPC .....	31
2.1.8 Advantage and Disadvantage of Profit Planning and Control .....	31
2.1.9 Sales Budget or Plan .....	32

2.1.10 Production Budget .....	38
2.1.11 Material Budget or Plan .....	42
2.1.12 Direct Labor Budget .....	46
2.1.13 Overhead Budget .....	47
2.1.14 Selling and Distribution Expenses Budget .....	49
2.1.15 Administrative Expenses Budget .....	49
2.1.16 Capital Expenditure Budget .....	50
2.1.17 Planning and Controlling the Cash Budget .....	51
2.1.18 Flexible Budget .....	52
2.1.19 Completion and Implementation of the Annual Profit Plan:- .....	52
2.1.20 Control Process of the Profit Plan .....	53
2.1.21 Budget Variance .....	53
2.2 Review of Related Studies .....	55

**CHAPTER -III: RESEARCH METHODOLOGY 59-62**

3.1 Introduction .....	59
3.2 Research design .....	59
3.3 Population of Sample:- .....	59
3.4 Hypothesis:- .....	60
3.5 Nature and Sources of Data:- .....	60
3.6 Data Collection Procedures:- .....	60
3.7 Research Variable:- .....	60
3.8 Analytical tools:- .....	61
3.8.1 Financial Tools:- .....	61
3.8.2 Statistical Tools:- .....	61

**CHAPTER -IV: DATA PRESENTATION AND ANALYSIS 63-116**

4.1 Sales Budget:- .....	64
4.2 Production Plan:- .....	72
4.2.1 Comparison of Actual Production and Sales:- .....	75
4.2.2 Short Term Production Plan:- .....	78
4.4 Balance Sheet:- .....	84
4.5 Cash Plan and Cash Flow Statement:- .....	87
4.7 Performance Evaluation: .....	91

4.6.1 Cost Volume Profit Analysis:- .....	93
4.6.2 Flexible Budget:- .....	99
4.6.3 Variance Analysis:-.....	100
4.6.4 Production Variance:- .....	102
4.6.5 Overhead Expenses Variance:- .....	103
4.7 Financial Analysis:- .....	103
4.7.1 Current Ratio:.....	104
4.7.2 Total Debt Ratio:.....	105
4.7.3 Working Capital Turnover Ratio .....	106
4.7.4 Total Fixed Assets:- .....	107
4.7.5 Total Asset turnover Ratio;-.....	109
4.7.6 Capital Employed Turnover Ratio:-.....	110
4.7.7 Net Profit Ratio:-.....	111
4.7.8 Operating Profit Ratio:.....	112
4.7.9 Net profit To Total Fixed Asset Ratio: .....	113
4.7.10 Return on Capital Employed Ratio:-.....	114
4.8 Major Findings:.....	115

**CHAPTER -V: SUMMARY, CONCLUSION AND RECOMMENDATIONS 117-123**

5.1 Summary:-.....	117
5.2 Conclusion:- .....	119
5.3 Recommendations:.....	121

**BIBLIOGRAPHY .....124**

**ANNEXES**

## LIST OF TABLES

	<b>Page No.</b>
Table No. 1: Sales Budget and Achievement .....	65
Table No. 2: Summery of Sales Budget and Achievement of NWSC for F/Y 2064/65 .....	69
Table No. 3: Summery of Sales Budget and Achievement of NT for F/Y 2064/65 ....	69
Table No. 4.: Sales Budget and Achievement (In Unit) .....	70
Table No. 5: Budgeted and Actual Production in unit of NWSC and NT.....	73
Table No. 6: Actual Production and Actual Sales in unit of NWSC and NT .....	76
Table No. 7: Budgeted and Actual Profit and Loss of NT for FY 2064/65.....	80
Table No. 8: Actual Profit and Loss of NWSC for FY 2064/65.....	81
Table No. 9: Net Profit Pattern of NWSC and NT .....	82
Table No. 10: Actual Balance Sheet of NWSC and NT .....	85
Table No. 11: Actual Summarized Balance Sheet of NWSC and NT for 2059/60 to 2064/65 .....	86
Table No. 12: Actual Cash Flow Statement of NT for F/Y 2064/65 .....	88
Table No. 13: Actual Cash Flow Statement of NWSC for F/Y 2064/65.....	90
Table No. 14: Cost Classification under Behaviour of NT.....	92
Table No. 15: Cost Classification under Behaviour of NWSC .....	93
Table No. 16: Cost Classification and Actual Sales and BEP Analysis of NT .....	94
Table No. 17: Cost Classification and Actual Sales and BEP Analysis of NWSC ....	96
Table No. 18: Flexible Budget of NT for FY 2064/65 .....	99
Table No. 19: Flexible Budget of NWSC for FY 2064/65 .....	100
Table No. 20: Computation of Sales Variance of NWSC and NT .....	101
Table No. 21: Computation of Production Variance of NWSC and NT .....	102
Table No. 22: Computation of Overhead Variance of NWSC and NT .....	103
Table No. 23: Current Ratio of NWSC and NT.....	104
Table No. 24: Total Debt Ratio of NWSC and NT.....	105
Table No. 25: Working Capital Turnover of NWSC and NT.....	107
Table No. 26: Total Fixed Asset Turnover of NWSC and NT .....	108
Table No. 27: Total Asset Turnover of NWSC and NT .....	109
Table No. 28: Capital Employed Turnover of NWSC and NT.....	110
Table No. 29: Net Profit Ratio of NWSC and NT.....	111
Table No. 30: Operating Profit of NWSC and NT .....	112
Table No. 31: Net Profit to Total Fixed Asset Ratio of NWSC and NT .....	113
Table No. 32: Return on Capital Employed Ratio of NWSC and NT.....	114