CHAPTER- I

INTRODUCTION

1.1. Background of the Study

During Post-second world war period posed a serious challenge to many developing countries for economic development and recovery. The remedy advocated was rapid industrialization, central planning and government intervention in key areas of the economy. Moreover, it was felt that private sector lacked necessary resources to shoulder the new responsibility of undertaking the development task. This set the forces leading to the expansion of state activities through the establishments of PE in many countries. Nepal, like most developing countries, made extensive use of PEs as a catalytic agent in the process of development.

Nepal has adopted Mixed Economic system. In this system, the private sector has a predominant role in market oriented and competitive economic activities in order to increase production through efficiency enhancement and resource use and utilization. However, the Government involvements in some of the specific areas like infrastructure and essential commodity producing. The government policy of 1992 on privatization excludes national defense sectors from privatization.

Establishment of new enterprise and their role in other developing countries encouraged Government of Nepal to adopt the path of development through the public enterprises. Especially after the dawn of democracy in 1951 the government of Nepal has put emphasis on the growth and development of national economy. For this Nepal adopted the 'Mixed economy model' where both public and the private sectors were expected to work harmoniously. (Pathak, 1983:39)

Nepal started its planned economic development in 1956 with the launching of the first Five-year Plan. Since then the number of PE has increased substantially in the various fields of national economy.

The first five-year plan (1956-61) adopted the principle of ‘Mixed economy’ and seven PE’s were established during the plan period. The second three-year plan (1962-65) demarcated the areas of public enterprises as basic utilities and infrastructures like electricity, transportation, communication, etc. Eleven PE’s were establishment during this period including establishment of Nepal Electricity Corporation. During the course of time several Development Boards were also Functioning in this Major infrastructure sector. In the tenth plan the government accepted the one window policy to attract the foreign investment.

Public enterprises in Nepal constitute a vital instrument for the Socio-economic development of the Country. It enjoys a strategic and crucial Position in our Mixed economy. They have been established in many sectors overall development 0f the country with different goals and objectives. (Shrestha,; 1990:1)

Profits are the primary measure of success of a firm. Objective of an organization could be maximizing its profit as well as to render service. Both objectives have a link with the management of the organization. Moreover revenue planning and management plays a key role for achieving these objectives. Although the profit is the yardstick of organization and organization should generate profit but profit do not generate automatically. It should be managed or planned. Therefore every organization should plan their profit through the help of revenue planning.

Nowadays, the profit planning and control (PPC) system is very familiar to originations, but the practicability of it depends upon the size of business. The common objective of PPC system whether it is applied to national finance or business administration is to formulate policy aimed at fulfilling objectives established in a considerable course of events in future and to provide a means for the constant comparison of actual progress toward this goal against the preconceived result.

In the context of Nepal, the history of comprehensive budgeting is not so long. The budget system was introduced in B.S. 2008. Business budgeting in the complete and systematic manner was the rare case for Nepalese commercial and industrial sector. Even application of comprehensive budgeting is still rarely being found. Nepalese economy is mainly agrarian economy. Few governments owned enterprises still have monopolistic role in the economy. In developing countries like Nepal, the discipline of profit planning is not so much familiar and practiced due to the backward position of public enterprises (PEs). Many of the Nepalese PEs and other companies have been suffering from the poor performance to apply the PPC system.

Finally profit planning and control is the most important tool to build economic strength in the enterprises and national treasury by the sources of revenue and profit. In developing countries like Nepal profit planning must help to grow Gross Domestic Product (GDP) by healthy enterprises.

1.2 Revenue Planning

Revenue results from the sale of goods and the rendering of services and is measured by the charge made to customers, client or tenants for goods and services furnished to them. It also includes gains from the sale or exchange of assets other than stock in trade, interest and dividend earned on investments and other increase in the owners' equity except those arising from capital contributions and capital adjustments. Revenue from ordinary sales or from other transaction in the ordinary course of business is sometimes described as operating revenue (Bhattacharaya, 1980:137).

Revenue planning provides as estimate of goal to be sold and revenue to be derived from sales. It is a starting point in the budgeting procedure. Sales plan or budget is one of the function budgets and is essentially, a forecast of sales to be effected in a budget period. It defines the quantities and values of expected sales in total as well as product wise and area wise during definite future period. The preparation of sales budget is based up on the sales forecast the sales for the planning period.

The revenue plan is the foundation for periodic planning in the firm because practically all other enterprise planning is built on it. Enterprise planning is built on it. In harmony with managerial budgeting, both strategic long term and tactical short term sales plans must be developed. The sales planning process is a necessary part of managerial budgeting or profit planning and control because it provides for the basic management decision about marketing. If the sales plan is not realistic, most if not all of the other parts of the overall profit plan also are not realistic (Welsch and Gordon; 2001:172).

The primary purposes of a sales plan are:-

a) To reduce uncertainty about future revenue,

b) To incorporate management judgments and decisions into the planning process,

c) To provide necessary information for developing other element of a comprehensive profit plan, and

d) To facilitate management control of sales activities.

1.3 Need of study

Analysis of revenue planning and management is a cruel part of overall profit planning of Business enterprises. Poor system of planning adversely affects profit planning. Thus, periodical analysis and review of revenue planning is necessary in order to ensure smooth functioning of an enterprise.

Budgeting is the key to productive financial planning is the essence of management and revenue planning is starting point of overall planning process; there is not any specific study about revenue planning and management of CHPCL. The present study is intended to analyze and evaluate the revenue planning system and its application in Chilime Hydro Power Company Limited.

The study will be useful to provide information and to draw attention of CHPCL management regarding what can be done for the future planning of revenue.

1.4 Overview of Chilime Hydro Power Company Limited (CHPCL)

Despite, hydropower being major resource endowment of Nepal, it is underutilized. The underutilization of this vast resource has been due to various reasons such as lack consistent project selection criteria, lack of effective planning for developing transmission and distribution system, lack of sustainable policy mechanism, lack of financial resources for investment, lack of confidence on Nepalese Engineers and Technicians for developing hydropower utilizing their expertise without technical assistance from outside, lack of entrepreneurship for investment in hydropower Sector, excessive dependence on multilateral and bilateral funding for its development, etc.

The nation's hydropower potential has been assessed at 83,000 MW. Of this potential, about 43,000 MW is assessed to be economically viable. Numerous run-of-river and multipurpose hydro schemes have been identified but remain undeveloped. Small and micro hydropower potentials remain virtually untapped in the country.

Chilime Hydroelectric Project a run-of-river scheme owned by Chilime Hydropower Company Ltd. is located in the Chilime and Syabrubesi VDCs in Rasuwa District of Bagmati Zone in the Central Development Region of Nepal. The scheme has an installed capacity of 22.10 MW, generating 20MW as based on the power purchase agreement with Nepal Electricity Authority (NEA). The power plant diverts water from Chilime Khola and fed into two turbines (11.28 MW each) installed into the underground powerhouse situated near Syabrubesi Bazar on the right bank of Bhote Koshi River. The Project is designed to generate 137 GWh energy per annum. The generated energy from this Project is being fed in to the National Grid of Nepal Electricity Authority (NEA) through a 38 km long 66 kV transmission line at Devighat, Nuwakot District from 2060/05/08 the date of commercial generation, almost after 10 years from the date of its conception. As per Power Purchase Agreement (PPA) made on 2054/03/11 the NEA takes the generated electricity from the power plant. Chilime Hydropower Company limited issuing by 24% of share general public, 25% of share issuing by NEA employee and 51% of share hold by NEA.

1.5 Vision, Mission and Objectives of CHPCL

Vision

- “To be the largest public hydropower company in Nepal.”

Mission

- To harness hydropower potential of the country for the benefit of the people at large by optimally utilizing the untapped resources and creating synergy with the private sector.

- To ensure attractive and sustainable long term return to our shareholders through prudent and sound investment.
- To create a competitive working environment with long term career prospects to our employees whereby they will nurture a culture to learn, grow and put their best effort to the growth of the company.
- To maximize the public participation and empower them to have better living, and
- To make the communities in which we live, work and serve better places to be.

Objectives

Chilime Hydro Power Company Limited is a public company established with the objective to work on all the generation, transmission and distribution systems. It carries out feasibility study, construction operation and management of small and middle hydropower project. It makes also an agreement between the company and the organization or individual to sale and purchase electricity. Besides, this gives and takes the work in contract between company and the different organization.

1.6 Historical Background of Electricity Development in Nepal

The development of electricity in Nepal based on the development of hydropower ,the development of this infrastructure has been essentially carried by the government but the private sector was recently also contributed and set a qualitatively important footing in this sector. There have been several government organization through the development is considered. The first project is parphing, which was established 1911 A.D. (1968 B.S.) with the capacity of 500 KW. Then second project is Sundarijal establish 1935 AD with the capacity 640 KW. In 1940 some small project with capacities around 100 KW began with separate operations from others, the Morang hydropower company was established. It was followed by the Birgung electric supply company and the Dharan electric power company The first step of institutional development within the ministry of water resources, which was organized with the specific role to developed electricity in Nepal. In the second three year plan (1962 - 1965) the Nepal electricity corporation (NEC) was established on August, 18th, 1962 as public enterprises to undertaken marketing and development electricity as better way. In 1975 the small hydro development board was established to cover the specific sub sector of hydro power in the remote & rural areas and to development hydro power range between 100-500 KW because to keep a part rural area, promoting their electrification while suddenly coming the difficulties of electricity transmission to remote & different local situation. In 1976 the water & energy commission (WEC) was established with direct dependence from the ministry of water resources. This body has an advisory function toward the government policy mater and for the coordinator to develop of water and energy resources. After then an executive board was created in 1989. The water and energy commission secretarial (WECS) to work out the policy recommendation for the water and energy commission (WEC) (Mandhar- 2052).

During the sixth five year plan (1980-1985) because of the poor performance of public enterprises, the government came out with a new corporate policy with the intention for better performance, modifying operational principle toward commercial principles. So that as for policy analyzing similar PEs. In this context setup single the institution responsible for the power sector, the NEA was established by government. (6^{th} year plan of Nepal).

1.7 Objectives of hydropower

Hydropower shall be developed to achieve the following objectives:

- To generate electricity at low cost by utilizing the water resources available in the country.
- To extend reliable and qualitative electric service throughout the Nepal at a reasonable price.
- To tie-up electrification with the economic activities.
- To render support to the development of rural economy by extending the rural electrification.
- To develop hydropower as an exportable commodity

1.8 Significance of Hydro-Electric Power in Economy

Electric energy has an important role to play in the economic development of a nation. On the one hand, the availability of electricity is a basis of overall development and on the other hand the consumption of electricity is regarded an indicator of economic situation in the country. Hence, for the supply of electricity that plays an important role in the overall development of the nation. It has become necessary to change existing immense quality of water resources into electricity. Potentiality and installed capacity we can suggest that there is an ample opportunity and potentiality for hydropower development in Nepal. Since energy plays an important role in the balance development of agriculture, industry and other sector nit is essential to supply energy in affordable price and utilized it effective. Undoubtedly, energy development is an immense for balanced development of the nation. Since large amount of financial investment is needed for the development of energy sector, maximum utilization of available financial resources is essential.

1.9 Objective of Study

The main objectives of the study are as follows.

- To see revenue planning, policies and practices of CHPCL.
- To understand the sources of revenue generation of CHPCL.
- To see revenue management aspect of CHPCL.
- To provide the suitable suggestion and recommendations for the improvement of planning system of CHPCL

1.10 Limitation of the study

The study is confined only to the revenue planning of Chilime Hydro Power Company Limited.

Following are the limitation of the study.

- The study covers the analysis of only 5 years i.e. F.Y. 2065/2066 to 2069/2070
- The study is based on secondary data from CHPCL's record.
- The study covers only the revenue planning & related

1.11. Organization of Study

This research study has been organized as followings chapters:

Chapter 1: Introduction

This chapter is the introductory chapter which covers general back ground, introduction to the organization, focus of study, limitation of study, objectives of study etc.

Chapter 2: Review of Literature

This chapter reviews the existing literature in related area mainly it includes the fundamental concept and brief review of previous research work i.e. book, journal, internet and thesis.

Chapter 3: Research Methodology

This chapter describes the methodology employed for the study. It includes research de sign, data collection and method of analysis and key term.

Chapter 4: Presentation and analysis of data

This chapter is the main chapter of the study which applies different (financial and statistical) tools and techniques for the data to get analysis. It also includes major findings of the study.

Chapter 5: Summary, Conclusions and Recommendations

This chapter gives the summary, conclusions and different recommendations with bibliography and appendixes.

CHAPTER II

REVIEW OF LITERATURE

Review of literature is a way to discover what other research in the area stated problem has uncovered. In this area, may research works have been conducted by various researches regarding various aspect of sales plan. Various several view and opinions have been expressed by the different persons/researchers regarding hydropower and their activities, magazines, journals, booklets, book and other related important publications which had been published by various sectors. Now, in this chapter, what other have related is important to know as it provides guideline and feed back to serve purpose of the study. So, the researcher has reviewed relevant literature relating to the field of this study.

In other words, the main purpose of literature review is to find out what types of works and researches have been done in past in the area of the research problem under study and what has not been done in the field of the research study being undertaken. For review study the researcher uses different books, reports, journals, and research studies published by various institutions, unpublished dissertations submitted by master level students have been reviewed. It is divided into two headings:

- Conceptual Review
- Review of Previous Research Work

2.1 Conceptual Review

The purpose of including this chapter is to clarify the concept of (Revenue Planning) Sales Plan of CHPCL, Budgeted and Actual Sales of CHPCL, Correlation coefficient between Sales Budget and Actual Sales and compare the sales with profit of CHPCL reviewed with the help of related text books, reference book and articles etc.

2.1.1 Concept of Planning

Planning is to a large extent the job of making things happens that would not otherwise occur. Translating goal and objectives into the specific activities and resources required achieving those goal and objective is call planning. Every organization should be developing three types of plans, short term, intermediate term and long term. Managers at every level of management perform planning. It is a decision in advance, what to do, when to do, how to do and who will do a particular task. Thus, it is an intellectual process, which involves looking ahead and preparing for the future. Generally, planning involves the following steps.

a) Determining the objectives

b) Formulating policies, procedure and programs

c) Scheduling

d) Budgeting.

According to R. Robbins "planning in the modern jargon involves government control of production in some form or others." Likewise at Bert Waterson "planning is an organized, conscious and continual attempt to select the best available alternatives to achieve specific goal. It has been used for variety of end, by different societies and in different ways" (Welsch and Gordon; 2001: 3).

Planning is the process of developing enterprises objectives and selecting a future course of action to accomplish them. It includes

- Establishing enterprises objective.
- Developing premises about the environment in which they are to be accomplished.
- Selecting a course of actions for accomplishing the objectives.
- Initiating activities necessary to translate plans into actions.
- Current re planning to correct current deficiencies (Welsch and Gordon; 2001:3).

Fundamentally, the managerial decision making entails the task of manipulating the relevant controllable variables and taking advantage of non-controllable variables that may influence long run operational success. The controllable variables are those that can be actively planned and controlled by management. In direct contrast, the non-controllable variables cannot influence by management. Yet this does not mean that effective planning with respect to them is not possible. Significantly, the non controllable variable must be projected and "planned for" to take full advantage of their anticipated favorable consequences. Thus we observe that managerial planning is necessary with respect to all the relevant variables (Welsch and Gordon; 2001: 9).

2.1.2 Characteristics of planning

There are certain characteristics in common planning. These characteristics should be helpful in understanding the fundamental nature of planning process. They are: (Thackre & Ellis; 1981: 164)

A. Uncertainty and risk

Simply stated, planning involves predicting the future. Thus the manager is faced with the situation of acting rationally in the face of uncertainty about the future. It is therefore useful to classify decision making according to its degree of certainty. Three levels can be identified.

1. Decision making under certainty

Decision making under conditions of certainty takes places when there is no doubt regarding the conditions that will be encountered. In these cases cost and benefit of the various options are usually determinable. The manager must merely select the choice that will be least costly or that will provide the maximum benefit.

2. Decision making under risk

A condition of risk exists where there is uncertainty, but the manager has some basis for anticipating what will happen.

B. Use of information

Planning require forecasting. Instead of using historical events as the basis for choice, the data must be converted to sole from of prediction. For example, where an operating plan in the form of a budget is being developed, the past sales would be the starting point for setting the future sales goal. Other consideration would include the volume and sales price expected in the future, the economic environment, population trends credit availability, and so far. The successful manage r, when he is planning, is concerned with information that will help him to determine the real difference among the options.

C. Simplifying

Planning provide the possibility of identifying an extremely large number of options for dealing with one issue. In addition, there can be a very large number of goals toward which to aspire. Plans cannot be made once and for all. Instead, they must be made with the understanding that they may not succeed. Furthermore, new insights and information may require a change in the goals. To deal with this problem in planning at a series of decisions must be made. On the other hand, the commitment of resources over some reasonable time span serves to simplify the planning job.

2.1.3 Introduction of Profit Planning and Control

Profit planning is the key point of management. Without proper planning profits will not just happen. So every enterprise should systematically plans for profit in a proper way. Various functional budgets are the basic tools for proper planning of profit and control other them.

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 of management; it helps in planning and co-ordination if used appropriately but not a replacement for management. Profit planning is a comprehensive and co-ordinate plan expressed in financial terms for the operations and resources if an enterprise for some specific period in the future (Frengen, 1973:144).

“Profit planning is predetermined detailed plan of action developed and distributed as a guide to current operations and as a partial for the sub segment evaluation of performance. Thus, it can say that profit planning is tool which may be used by management in planning the future courses of action and controlling the actual performance” (Gupta, 1992:521).

“Profit planning is one of the more important approaches that have been developed to facilitate effective performance of the management process. The concepts and techniques of profit planning have wide application in individual business enterprises, governmental units, charitable organizations and virtually and all groups endeavors" (Welsch and Gorden, 1990:30-31).

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

The managers are efficient if it is able to accomplish the objective of the enterprise. It is effective, when it accomplishes the objectives with minimum effect and cost. In order to attain longer-rang efficiency and effectiveness, management must chart out its course of action in advance. A systematic approach that facilitates effective management performance is profit planning and control of budgeting. Budgeting is therefore an integral part of management. In a way, a budgetary control system has been described as a historical combination of a goal-setting machine for increasing an enterprises profit and goal achieving machine for facilitating organizational co-ordination and planning while achieving the budgeted targets.

Profit is the ultimate goal of every business house. They involve in business for making profit. Profit cannot be achieved easily. It should be managed well with better managerial skills. So, profit is the planed and controlled output of management. By element, profit is the difference of revenue and costs. Profit plan, thus refers to the planning of revenue and planning of costs.

Comprehensive profit planning and control is a new term in the literature of business. Though it is a new, 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. The profit planning and control can be defined as process/techniques of management that enhances the efficiency of management. Profit planning and control involves development and application of:

- Broad and long range objectives for the enterprises,
- Specification of goals,
- Long range profit plan in broad terms,
- Tactical short range profit plan de tailed by assigned responsibilities (division, department, project).
- A system of periodic performance reports detailed by assigned responsibilities.
- Control system,
- Follow of procedures

Hence, profit planning and control represents an overall plan of operations, providing guidelines to management and acting as single light for the management. It enables the management to correct its policy. Profit planning and control covers a definite period of time and formulates the planning decision of management. It consists of three main budgets.

- **Operational Budget**: Budget related with revenue and expenses, such as sales budget, production budget, purchase budget, etc.
- **Financial budget**: Budget related with financial statements, such as: balance sheet, income statement, etc.

- **Appropriation budget**: budget related with advertising and publicity expenditure, research etc.

2.1.4 Sales Plan (Budget) and sales forecasting

Sales Planning and Forecasting are different. Although related, they have distinctly different purposes. A forecast is not a plan; rather it is a statement and a qualified assessment of future conditions about a particular subject (e.g., sale revenue) 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 company may accept, modify, or reject the forecast.

In contrast, a sales plan incorporates management decisions that are based on the forecast, other inputs, and management judgments about such relate items as sales volume, prices, 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 the managerial commitment to aggressive actions to attain the sales goals. In contrast, sales forecasting is a technical staff function (Welsch, 2001:172).

It is important to make a distinction between the sales forecast and the sales plan primarily because the internal technical staff should not be expected or 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.

The sales budget is prepared from the sales forecast. A sales forecast is a broader than a sales budget (plan), generally encompassing potential sales for the entire industry, as well as potential sales for the firm preparing the forecast. Factors that determined the demand of the product are as follows:

- General socio-economic condition
- Demographic condition
- Industry economic condition
- Political environment
- Movements of economic indicators; such as, gross national product, employment prices, and personal income.
- Consumer taste and preference
- Advertising and product promotion industry competition
- Market share occupancy
- Price of the product
- Price of the related goods- substitutes, compliments, and supplements

2.1.5 Method of Sales Forecasting

1. Personal Judgment Method or Non-mathematical Method

a. Sales Forecasting Composite:

This approach of sales forecasting emphasized the maximum participation from bottom up. Under this projection method, sales forces from sales divisions engage in sales projections. Sales force collects socio-economic information from the area through informal chat, ocular survey or formal data collection. Based upon the historical sales data and socio-economy information, sales forces prepare sales projections and submit it to sales departments. Sales departments, after collecting sales projection of all territories makes adjustment on projected figures, and compiles the figure and submits to chief executive for budget to sales projection for the company. After checking the figure, chief executive returns back the budget to sales department with tentative approval.

b. **Sales Division Manager Composite**:

This approach emphasizes the participation of district or product sales managers rather than the individual sales persons. Under this method of sales projections, district or product sales managers with the historical and analyzed information project the sales of future and submit to chief executives for approval. The chief executives return the sales projection to sales department with its tentative approval.

c. Judgment of Chief Executives (Rule of Thumb):

Under this approach, chief executive him\herself involves in projecting sales. He\she receives historical sales data from sales department and gets information after environmental assessment. With this available information, he\she uses his \her judgment to forecast the sales.

2. Mathematical or Statistical Method

a. Economic Rhythm Method:

Under this approach, sales are projected based upon economic rhythm i.e. movement of economy. While projecting sales using this method, first of all, the factors of economy that have a high influences on demand or sales of the product are analyzed. Then historical sales are adjusted with the influences of economic factors. Sometime such factors push the sales and sometimes pull the sales. Generally, cyclical variance, seasonal variance and price variances are observed in economic factors (Welsch, 2001).

b. Regression Analysis:

Regression method is the most popular statistical techniques of demand estimation. In regression method of demand\sales forecasting, the firm estimates the demand function for a product. In the demand function, quantity to be forecasted is a “dependent” variable. For example, demands for meat in affect the demand are called "independent" or "explanatory" variables. For example, demand for meat in Katmandu may be said to depend largely on 'per capital income' of the city and its population. Here demand \sales for 'meat' is dependent variable and per capital income and population are the 'explanatory' variables.

c. Time Series Analysis:

One of the most frequently used forecasting methods of sales is time-series analysis. Regression analysis can be used to quantify the relationship between variables but data collection can be more complex if regression model consists a large number of independent variables. When changes in a variable show discernible patterns over time, time series analysis is an alternative method for forecasting future values of sales. Time series data refers to the values of a variable arranged chronologically by days, weeks, months, quarters, or years. The first step in time series analysis is usually to plot past values of the variables that we seek to forecast (say, the sales of a firm) on the vertical axis and time on the horizontal axis in order to visually inspect the movement of the time series overtime. Time series analysis attempts to forecast future values of time series by examining past observations of the data only. In this assumption is made that the series will continue to move as in the past. For this reason, it is often referred as "Naïve forecasting" (Welsch, 2001).

2.1.6 Sales Budget or Sales Plan

"The sales budget provides an estimate of goods to be sold and revenue to be derived from sales. It is a starting point in the budgeting procedure. That is, budgeting exercise usually commences with the preparation of the sales budget because the customer's demand is usually the key factor for the most organization. Sales budget in one of the functional budgets and are essentially, a forecast of sales to be effected in a budget period. It defines the quantities and values of expected sales in total as well as product-wise and area-wise during definite future period" (Munakarmi, 2002:217).

"The sales planning process is a necessary part of PPC because (a) it provides for the basic management decisions about marketing and (b) based on those decisions it is an organized approach for developing a comprehensive sales plan. If the sales are not realistic, most if not all of the other parts of the overall profit plans also are not realistic" (Welsch and Gordon, 2000:171).

Preparation of sales budget is the starting point for the development of profit plan. After having the planning premises of the organization the sales plan is developed. Sales plan is the station point in the preparation of the comprehensive profit planning and control. All the other plans and budgets are depended upon the sales budget. The budget is usually presented both in units and rupees of the sales revenue or sales volume. The preparation of sales plan is based upon the sales forecast. A variety of methods are used to forecast the sales for the planning period.

The primary purposes of sales plan are;

- To reduce uncertainty about future revenues.
- To in corporate management judgments and decisions in to the planning process.
- To provide necessary information for developing other elements of two comprehensive profit plans.
- To facilitate management control of sales activities (Welsch and Gordon, 2000; 172).

2.1.7 Strategic and Tactical Sales Plans Compared

In harmony with a comprehensive profit plan, both strategic long-term and tactical short-term sales plans 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 plans as separate activities. However, they must be integrated because the short –range sales plan should dovetail with the strategic long-rang plan in all major respects.

Strategic sales plan

As a practical approach, a company may schedule completion of the strategic long-term sales plan as one of the first steps in the overall planning process. For example, a company operating on a calendar year may complete a long-term sales plans, at least in tentative form, by the end of July because this gives sufficient lead time for interim considerations essential to development of next year's comprehensive short-term profit plan during the latter part of the preceding calendar year. Long-term sales plans are usually developed as annual amounts. The long-term sales plan uses broad groupings of products (product lines) with separate consideration of major and new products and services. Long-term sales plans usually involve in depth analyses of future market potentials, which may be built up from a basic foundation such as population changes, state of the economy, industry projections, and finally company objectives. Long-term managerial strategies would affect such areas as long-term pricing policy, development of new products and innovations of present products, new directions in marketing efforts, expansion or managerial strategy decisions is explicitly brought to bear on the long-term sales plan primarily on a judgment basis.

Tactical sales plan

A common approach used for short time horizons in a company is to plan sales for twelve months into the future, detailing the plan initially by months for the first quarter. At the end of each month or quarter throughout the year, the sales plan is restudied and revised by adding a period in the future and by dropping the period just ended. Thus, tactical sales plans 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 of minor products. Short-term sales plans are usually developed in terms of physical units (or jobs) and in sales and \or service dollars. Short-term sales plans must also be structured by marketing responsibility (e.g. by sales districts) for planning and control purposes. Short-term sales plans may involve the application of technical analyses; however, managerial judgment plays a large part in their determination.

The amount of detail in a tactical sales plan is a function of the company's environment and characteristics. A short-rang plan should be in broad terms. To establish policy about detail in the short-rang sales plan, the main question is use of the results. First, the major consideration is to provide detail by responsibility for planning and control purposes. Second, the short-range sales plan must provide detail needed for completing the profit plan components by other function managers. That is, the production managers will need sufficient detail for planning production levels and plant capacity need; the financial manager will need sufficient detail for assessing and so on. Third, the amount of detail also depends on the type of industry, size of the firm, availability of resources, and use of the results by management (Welsch, 2001).

2.1.8 Purpose of Sales Plan

The primary purposes of sales plan are follows:

- To reduce uncertainty about revenue
- To provide necessary information for developing to her elements of a comprehensive profit plan
- To incorporate management judgment and decisions in the planning process.
- To facilitate management control of sales activities (Welsch, 2001:172).

The main purpose of sales plan is to reduce uncertainties which we will be in front of us and we have to face in future. From sales plan we will get lots of formations and will be easy to study alternatives to get correct decision in future.

2.1.9 Components of Comprehensive Sales Planning

The components of comprehensive Sales planning listed as follows.

A) Components of the foundation for comprehensives sales planning:

- External variables identified and evaluated
- Broad enterprise objectives and goals formulated
- Strategies for the company developed
- Planning premises specified

B) These are the main components of comprehensive sales plan.

Component	Strategic plan	Tactical plan
Management policy and assumption	Broad and general	Detailed and specific for the year
Marketing plan (sales and services revenues)	Annual amounts; major groups	Detailed; by product, time and responsibility
Advertising and promotion plan	General; by year	Detailed and specific for the year
Distribution (selling) expenses plan	Total fixed and total variable expenses; by year	Fixed and variable expenses; by month and by responsibility

(Welsch, 2001:175-176)

2.1.10 Developing a comprehensive sales plan

Step 1 Develop management guidelines specific to sales planning including the sales planning process and planning responsibilities.

Step 2 Prepare one (or more) sales (market) forecasts consistent with specified forecasting guidelines including assumption.

Step 3 Assemble all the other data that will be relevant in developing a comprehensive sales plan.

Step 4 Based on step 1, 2 and 3 above, apply management evaluation and judgment to develop a comprehensive sales plan.

Step 5 secure managerial commitments to attain the goals specified in the comprehensive sales plan.

2.1.11 Objective of Budgeting

The main purpose of budget is to ensure the planned profit of the enterprise. So, it is considered as a tool of planning and controlling the profit. One of the primary objectives of an annual budget is to measure the profit expectation for the next financial year with regarded to all the circumstances favorable and unfavorable that can influence the trading prospect. (Regineld and frention 1982:17)

The main purposes of budgeting are:

1) To help provide direction for choosing from among many future alternatives.

2) To help identify potential problem of achieving the specified goals and objective.

3) To communicate objectives, constraints and expectation of budget to people throughout an organization (Munakaranil 2002:215- 216).

The main objective of budgeting may summarized as follows.

1) It is a plan, which reflects the policy of a business in financial terms.

2) It is a plan of action and services as a declaration of policies.

3) It is a control document by which management can monitor actual performance.

4) It is the plan to forecast for future to avoid losses and to maximize profits, i.e. to help in planning.

5) It is a plan to state the firm's expectations (goals) is clear, formal terms to avoid confusion and to facilities their attainability.

6) It defies the objective for the entire executive's communication.

7) It is a plan to bring about co ordination between different functions of an enterprise i.e. to help in co ordination.

8) It is a plan to communicate expectations to all concerned with the management of the firm so that they are understood, supported and implemented.

9) It acts as a motivator of employees.

10) It provides a means of coordination and communication.

11) It is a measure against which to evaluate the quality of management.

12) Budget facilitates centralized control with delegated authority and responsibility. (Rathnam, 1974:2)

2.1.12 Characteristics of Good Budgeting

The characteristics of good budgeting are as follows.

- Budget may be formulated for the organization as a whole or for any sub-unit.
- A good system of accounting is also essential to make the budgeting useful.
- A budget is a qualitative expression of a plan of action and aid to coordination and implementation.
- A good budgeting system should involved persons at different levels while preparing the budgets the subordinates should not feel only Imposition on term.
- Budget are designed to carry out a verity of functions planning, evaluating activities and implementation of plans (Rathnam, 1974:21-22)

2.1.13 Classification of Budgets

Budgets may be classified from various viewpoints depending upon various bases adopted for such classification. The following bases of classification are generally in use:

I. On the basis of time.

II. On the basis of function.

III. On the basis of flexibility

IV. On the basis of nature of business activity

I. On the Basis of Time

On the basis of time, there are three types of budgets. They are:

a. Long Term Budget

These budgets normally cover of a firm over a prospective of five to ten years.

b. Short Term Budget

These budgets are usually prepared for one to two years. These are always prepared of production plan in monetary terms.

c. Current Budgets

These budgets are usually prepared for one to twelve months and are the short term budgets adjusted to current conditions or prevailing circumstances.

II. On the Basis of Function

Those budgets whose number depends on the size and nature of the business are called functional budget. Normally the following are the types of functional budget.

a. Sales Budget

It is primary budget of PPC. This is a forecast of total sales classified according to groups of products, salesman and geographical.

b. Production Budget

Production budget is transformation process of sales budget. It is a forecast based on sales, productive capacity and requirement of inventories.

c. Direct Material Budget

Direct material budget can also be classified into two types:

Direct Material Usage Budget

Material budget is prepared after the determination of production need. Material consumption budget is depended upon production volume. Material consumption per unit of output helps to prepare material use budget for different of materials to be consumed by output. Budgeted production volume multiply by material per unit of output gives the budgeted consumption of materials.

Direct Material Purchase Budget

Manufacturing company purchases raw materials for its products to be produced. The quantity of materials to be purchase is determined by both production volume and inventory requirement. Purchase budget helps to determine the quantity and volume of materials required to be maintained (Munakarmi, 2002:220).

d. Direct Labor Cost budget

Labor cost budget is calculated on the basis of labors for budgeted production volume and labor hour related for each type of labor force. Given budgeted production, the engineering and personnel department can work together to determine the necessary labor requirement for the production department. Labor requirements are stated in total number of workers, specific number of skilled and unskilled workers and production hour need for given production volume. Labor cost computation includes monetary cost and fringe benefits given to labor force (Munakarmi, 2002:222).

e. Overhead Budget

Overheads, here are classified as factory overhead, administrative overhead and selling overhead. Factory overhead is also known as manufacturing or works overhead. It is aggregate of indirect expenses of factory department. It includes both variables and fixed overhead and including following expenses: factory rent and rates, lighting and heating, factory power, fuel and insurance, factory salaries, indirect wages and pension, factory stationary and printing, canteen, medical, educational and entertainment facilities to the factory workers repair and maintenance expenses, depreciation etc.

f. Cost of Production Budget

Budgeted production cost is known as cost of production budget. It is the aggregate of budget material cost, budgeted direct labor cost and budgeted factory overhead.

g. Selling and Administrative Expenses Budget

Selling and administrative expenses include both fixed and variable expenses. Administrative expenses include critical wages and executive salaries, supplies, postage and telephone etc. Likewise selling and distribution expenses include sales commission and salaries, advertising and sales services expenses, traveling expenses, carriage and freight on sales, packing cost etc.

h. Cash Budget

Cash budget is the planning of cash flows and cash requirement for the budgeted period.

Capital Budget

Capital budget involves the entire process of planning expenditures with returns that are expected to extend beyond one year. The choice of one year is arbitrary, of course, but it is a convenient cut off point for distinguishing between kinds of expenditures. Obvious example of capital outlays are expenditures for land, buildings and equipment and for permanent additions to working capital associated with sales growth.

III. On the Basis of Flexibility

On the basis of flexibility, budget may be classified into two types**.**

a. Static Budget

It shows only one active level at once. They don't change in the volume of activity. Such budgets are usually prepared from one to three months in advance of the fiscal year to which they are applicable.

b. Flexible Budget

It shows the series of activity level. The main objective of flexible budget is to select least cost combination for the firm. In case of such budgets, revenue and cost targets are set in respect of different level of activity even from zero to hundred percent of production volume.

IV. On the Basis of Nature of Business Activity

Budgeted may also be classified on the basis of nature of business activity. They are:

a. Capital Expenditure Budget

Capital expenditure budget is needed to compute or plan the cost of capital and appraise the project. Such budgets assume more significance in the case of large and progressive manufacturing concerns.

b. Operating Expenditure Budgets

Operating budgets deal with the plan for routine activities. These budgets are based on forecast like sales, reproduction costs, revenue etc.

2.1.14 Budgetary Control

Budgetary control is a system of controlling cost, which includes the preparation of budgets coordinating the departments and establishing responsibilities, comparing actual performance with the budgeted and outline upon results to achieve maximum profitability.

- Budgetary control involves the following process:
- Preparing budgets sets.
- The actual figure is recorded.
- The budgeted and actual figure is compared for studying the performance of different cost centers.
- If actual performance is less than budgeted norms, a remedial action is taken immediately.
- The business is divided into various responsibility centers for preparing various budgets.

2.1.15 Problems and Limitations of Budgeting

Budgeting is not fast proof; it can suffer from certain problems and limitations. The major problems of budgeting system are as follows:

1) Developing meaningful forecast and plans especially the sales plan.

2) Seeking the support and involvement of all level of management.

3) Establishing realistic objectives, policies, procedures and standards of desired performance.

4) Maintaining effective follow up procedures and adopting the budgeting system wherever the circumstance changes.

5) Applying the budgeting system in a flexible manner.

6) Educating all individuals to be involved in the budgeting process and joining their full participation. (Welsch and Gordon, 2000:56).

The following are the limitations of budgeting system;

1) Budgeting is not an exact science it success hinges upon the precision of estimates.

2) The installation of a perfect system of budgeting is not possible in a short period. Budgeting has to a continuous exercise. It is a dynamic process.

3) The success of the budgetary program is to understand by all and that managers and subordinates put concerned effort for accomplishing the budget goals.

4) Budgeting will be ineffective and expensive if unnecessarily detailed a complicated. It should be flexible and rigid in applications.

5) The presence of a budgeting system should not make management complacent. To get the best results of management, management should use budgeting with intelligence and foresight. Budgeting cannot replace management.

6) The purpose of budgeting will be defeated if carelessly budget goals are determined as the conflict with enterprise objectives.

7) Budgeting will hide in efficiencies if a proper evaluation system lacks. It should be re-examined regularly.

8) Budgeting will lower rural and productivity if unrealistic targets are gets and if it is used as pressure tactic (Welsch and Gordon, 2000:57).

2.1.16 Control Process of the Profit Plan

Performance reporting for internal management use is an important part of a comprehensive Profit Planning Control system. Performance reports are usually prepared on monthly basis and follow standardized format from period to period. Such reports are designed to facilitate internal control by the management. Performance report compared goals, objectives, and budget plan with actual result.

The performance report should be designed in such a way that it will fulfill the following criteria.

1. Tailored to the organizational structure and locus of controllability.
2. Designed to implement the management-by-exception principle.
3. Repetitive and related to short time periods.
4. Adapted to the requirements of the primary users.
5. Simple, understandable, and reports only essential information.
6. Accurate and designed to pinpoint significant distinctions.
7. Prepared and presented promptly.
8. Constructive in tone.

Performance reports should be prepared in such a way that it clearly distinguishes between controllable and non-control able items. The actual results are compared with plans, objectives and standards and the managements analyze the differences.

In preparing the performance reports we should give careful attention to format. Title and headings and side captions should clearly identify the data and technical jargon should be avoided. It should not be too long and complex tabulations and unnecessary data should be avoided and the reports should be relevant.

The measurement of actual performance relative to planned targets is just as applicable to non-manufacturing companies as it is to manufacturing enterprises. Service and retail companies also use tactical plans that specify performance standards, measure actual results, and prepare responsibility center performance reports that analyze departments from planned performance (Welsch, 2001:542-559).

Performance report is aimed at showing the variance should be expressed in amounts as well as a percentage of the planned or budgeted amount. Statistical control unit should also be developed to determine the significance of variance. Monthly performance report should generally shows variance for the period begin reported and cumulative variances to date such reports are usually prepared for each responsibility centers.

2.1.17 Analysis of Variance

The difference between planned goals and actual result is called variance. Performance reports shows such variance, them the next step comes to analyze such variances to identify the underlying causes behind it, for managerial planning and control process.

Variances can be either plus minus, depending upon whether actual result is greater or less than standard results. Since standard result is a measurement of what a particular result ought to be any deviation from it can be interpreted as good or bad, favorable or unfavorable to attainment of the organizations profit goals.

The importance of variances lies primarily in the use management can make of them in determining the causes of off-standard performance and in taking corrective action. Since variances can reflect performance which is either better or worse than standard, it is clear that they can be the basis for praise or criticism of the managers responsible for the control of the particular costs. Thus it is important that 1) standards be carefully set, realistic, and attainable; 2) variances reflect clearly and correctly the causes for deviations of actual from standard performance (Lynch, 1983:198).

Comparison of actual results 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 budget goals. If a variance is significant, a careful management study should be made to determine the underlying causes. The underlying causes, rather than the actual results, should lead to remedies through appropriate corrective action by management. There are numerous ways to study or investigate variances to determine the underlying causes. Some of the primary approaches are the following.

1. Conferences with responsibility centre managers, supervisors, and other employees in the particular responsibility centre 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 investigation by line managers.
5. Investigation by staff groups.
6. Internal audits.
7. Special studies.
8. Variance analysis

“Variance analysis involves a mathematical analysis of two sets of data in order to gain insight into the underlying causes of a variance. On amount is treated as the base, standard, or reference point. Variance analysis has wide application in financial reporting” (Welsch, 2001: 569-570).

Variances are analyzed in the following areas:

1. Material variances
2. Labor variances
3. Overhead variances
4. Sales variances
5. Profit variances

Variance is the deviation between actual and budgeted or standard results.

Following are the basic steps to analyze variances:

1. Setting standards
2. Measurements of performance
3. Analyzing variances.
4. Taking corrective action.

Variance should be broadly grouped under two categories; favorable and unfavorable variances further should be classified as controllable and non-controllable. If unfavorable variances are arise due to controllable causes, and then related center or managers should be accounted for responsibility.

2.2 Review of Related Studies

2.2.1 Review of Journals and Articles

Andersen, (2010) has concluded high performing sales teams plan to win competitive sales opportunities by implementing the right strategies, deploying the right resources and executing effectively against their plans. They understand that effective customer engagement results in competitive advantage when we plan to win, particularly when the customer is executing their buying or selection process ("planning to select") and evaluating suppliers accordingly.

Because customer buying processes have evolved (and continue to evolve) in the new millennium, planning to win business is a function of a sales or account team's ability to:

- Discover and assess customer needs and requirements
- Align with the customer's decision team and develop relationships and solutions
- Position solution advantages and connect with the customer's vision of success
- Differentiate value and prove superior customer fit
- Build authentic relationships based on trust and credibility.

2.2.2 Review of Previous Research Work

Review of related studies which are conducted by previous researchers in selected area is listed below.

Khulel (2010) has conducted a research on *Sales Budget Practice in Insurance Company* a case study in Everest Insurance Company Ltd.

Objectives of the Study:

The general objectives of this study are to examine and evaluate the planning system specially the sales planning system used by EIC. The major objectives of this study are highlighted as follow:

- To analyze the effectiveness of profit planning in EIC.
- To study the variance in budgeted and actual sales
- To suggest appropriate recommendations

Major Findings of the Study:

- There is no significant classification of overhead expenses
- There is no practice of PPC except sales budget
- The company has never failed to achieve its target
- EIC has no clear cut vision of PPC

Sharma, (2011), has conducted a research in a topic *Revenue Planning & Management of Manufacturing Public Enterprises* a case study of Singh Durbar Vaidya Khana Vikas Samiti.

Objectives of the Study:

- To analysis the actual sales and budgeted sales.
- To examine revenue generate by SDVKVS.
- To recommendation and suggestion for RDL.

Major Findings of the Study:

SDVKVS has adopted only product/categorized budget. But it has not adopted practice of preparing monthly budget.

- There is no surprise sale.
- There are no actual bad debts shown in an account.
- In the calculation of profit volume ratio, it has shown that its fixed cost is high.
- The pricing policy needs revision and adjustment of pricing policy organization is not fare.

Dahal, (2012), has conducted a research in a topic *Sales and production budget's effectiveness in selected products of chaudhary group* a case study in Chaudhary Group.

Objectives of the Study:

- The specific objectives of the study are as follows:
- To evaluate the present trend of sales and production budgets of Chaudhary Group.
- To analyze the variance between budgeted and actual of Sales and productions.

- To draw the appropriate conclusion and give suitable suggestions and recommendations for improving the production and the sales strategy of Chaudhary group.

Major Findings of the Study:

- Total sales achievement and production of Chaudhary Group are fluctuating year after year.
- The company has not properly planned the production and sales budgets.
- The company has never achieved its target sales and budgeted production.
- The company prepares the budget only on annual basis without dividing total amount into interim periods.
- The company has not formulated competitive sales strategies.

Karn, (2013), has conducted a research in a topic *revenue planning and control a case study in Nepal Telecom Ltd.*

Objectives of the Study:

- To analyze the trend of existing revenue planning practices of NTC.
- To highlight the current revenue planning premises adopted and its impact on profitability of NTC.
- To evaluate the variance between revenue and cost planning.
- To provide appropriate suggestions and recommendations for improvement planning system of NTC.

Major Findings of the Study:

- NTC has not adopted of practice of preparing monthly operating income report.
- NTC prepares some functional budget like sales, purchase budget, expenses etc. These all budgets are prepared on an annual basis.
- Segregation of Semi-variable cost is ignored by this enterprise and NTC has not been practicing CVP analysis.
- There is consistency between planned sales and actual sales and correlation coefficient between plan & actual sales is high.
- NTC has not been prepared the separate expenditure budget, like overhead budget, office and administration budget etc.
- Variable cost of NTC is very low compared to its fixed cost. Contribution margin ratio of NTC is very high.
- Fixed cost of NTC is high in the comparison to variable cost.
- Employee cost and administration expenses are high.

Sharma, (2013), has conducted a research in a topic *sales plan a case study in Butwal Power Company Ltd.*

Objectives of the Study:

- To analyzed sales budget prepared by Butwal Power Company Limited
- To evaluated the variance between budgeted and actual achievement of Butwal Power Company Limited
- To compare the sales with profit of the Butwal Power Company Limited.

Major Findings of the Study:

- Jhimruk power plant has a high degree of positive correlation coefficient between budgeted sales and actual sales with local and it has positive correlation with NEA (i.e. 0.9783 &0.9016 respectively). It means actual sales change in same direction of budgeted sales.

- Andhikhola power plant has a high degree of positive correlation coefficient between budgeted sales and actual sales with local (i.e. 0.96) and with NEA it has positive correlation coefficient between budgeted sales and actual sales (i.e. 0.8089).
- The ratios of net profit with sales revenue (NPM) of the BPC are 34.20%, 30.87%, 19.01%, 21.62% and 18.93 % in the fiscal year 2064/65 to 2068/69 respectively.
- Selling price per unit is different in every fiscal year increase around 6.50% & 3.70 %per annum of Jhimruk with NEA & local respectively and 6.20% & 3.90%per annum of Andhikhola with NEA & local consumer respectively.
- Trend analysis shows both power plants have highly negative sales units for the future with NEA (i.e. annual rate of decrease are 937128.3 & 691431.2 units of Jhimruk & Andhikhola respectively) but with Local both have positive sales units (i.e. annual rate of increment are 505924.8 & 1400408 units of Jhimruk & Andhikhola respectively).

2.3 Research Gap

The study doesn't find any research about the particular topic i.e. "Revenue Planning and Management of CHPCL". Over all studies mentioned about the sales Budget and Profit Planning .They are basically related to Nepalese Public Enterprises. Those studies have pointed the similar findings and conclusions. This study tries to find revenue plan of Hydroelectric Company. Therefore, this study is designated to Revenue Planning and Management of CHPCL.

CHAPTER - III

RESEARCH METHODOLOGY

The knowledge of human being is rising through the getting answer of different questions like why, how, when, where, what etc. To answer these questions, they should gather information and analyze them to achieve their goals or satisfaction. "The research for gaining the knowledge about method of goal achievement, which we desire, is known as research methodology" (Joshi; 2001:12-13).

Research is to find out to gain knowledge about a phenomenon. Here are means repeatedly or again and again, and 'search' says to investigate or to find. Thus, Combine researching repeatedly is called research, which includes searching new facts, knowledge, principles and theories in scientific way Likewise; research needs various methodologies, tools, techniques etc. A systematic research studies needs to follow a proper methodology to achieve the pre mentioned objectives. "Research methodology is a sequential procedure and methods to be adopted in systematic study". The proper analysis of the study can be meaningful only on the right choice of research tools that help for meaningful conclusion. This chapter is mainly associated with research design, sample design, period of study, sources of data & data collection procedures, data processing & terms, methods, tools techniques, theories employed in the analysis & interpretation.

3.1. Research Design

"Research design is the plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variance" (Wolff and Pant; 1999:50). The main objective of the study is to analyze to cash flow statements of the public enterprise and provide suggestions on the basis of findings.

In order to fulfill objectives of the study as much as possible, an adequate attention has been paid in the process of Research Design. The research is carried out on the basis of secondary sources data. In the study, the researcher has followed the descriptive cum analytical research design to analyze the financial performance of the selected public enterprise. Various financial parameters and an effective research technique are employed to especially identify the weaknesses of these institutions. On the ground of observed infirmities and inefficiencies, an attempt will be made to suggest the reasonable and useful recommendations to the concerned.

3.2. Population and Samples

There are total numbers of listed companies 229 by the end of the first eight months of fiscal year 2012/13 in Nepal. They are related with different sectors like banking, manufacturing and processing, hotels, trading, insurance, finance and others. It is not possible to study all of them regarding the research topic. Therefore among these, one reputed public company Chilime Hydropower Company Ltd. is selected for this research study.

3.3. Sources of Data

This study is mainly based on the secondary data collected from the different published sources. The audited Balance Sheet, profit & loss account and related schedules of the concerned public enterprise was collected. Besides these, other essential data and information were collected from some published and unpublished documents. So far as the data collection procedure is concerned, annual reports of selected organizations were collected. In addition, answers on certain queries made to the staffs of concerned organization also assists in data collection procedure. The researcher has also consulted the library to gather necessary data and information during the course of study.

3.4. Data Processing and Tabulation

The necessary data from 2065/066 to 2069/070 for the study collected from various sources are recorded systematically for analysis. All the information is then identified, grouped and tabulated as per the need of study in order to meet the research objectives. Tabulated data are presented through the easy understanding graphs.

3.5 Tools and Techniques Used to Analyze the Data

As the data used for this study is secondary data, they are managed in proper table, format and chart for meaningful interpretation. Various statistical, financial as well as mathematical tools are used as peer need in order to came in conclusion. The tools that are used to in this study are:-

- **Arithmetic Mean**

  Arithmetic mean or simply a 'mean' of a set of observations is the sum of all the observations divided by the number of observations. Arithmetic mean is also known as arithmetic average.

  Mean $=\frac{\sum x}{n}$

- **Standard deviation**

  The standard deviation is the absolute measure of dispersion is which the drawbacks present in other measures of dispersion are remove. It is said to be the best measure of dispersion as it satisfies most of the requisites of a good measure dispersion.

  Standard deviation (S.D) is defined as the positive square root of the mean of the square of the deviations taken arithmetic mean. It is denoted by σ.

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n}}$$

X= variable

n= no. of observation.

- **Correlation**

  To variables are said to have "correlation", when they are so related that the change in the value of one variable is accompanied by the change in the value of the other.

  $$\text{Correlation (r)} = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \times \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

- **Graphs and diagrams**

  Graphs and diagrams are nothing but the presentation of statistical data in the form of geometrical figures like points, lines, bars, rectangles, circles etc.

- **Trend Analysis**

  Forecasting technique that relies primary on historical time series data to predict the future. The analysis involves searching for a right trend equation that will suitably describe trend of data series. The trend may be linear, it may not. A linear trend can be obtained by using a least-squares method. The line has the equation y= a + b x

  y= dependent variable

  a=value of y when x=0

  b= slope of the trend line or amount of change that comes in y for a unit change in x.

3.6 Research Variables

Balance sheet, Profit and loss account, Depreciation schedule and sales budget are the research variables.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

Revenue planning (sales budget) is a forecast of what the company can expect to sell during a budget period. It is forecast of total sales expressed and incorporated in quantities and money. A sales budget is the starting point in which other budgets are also based. All other budgets such as production budget, purchase budget, Labors budget, Overhead budgets etc. are affected by sales budget. Therefore, sales budget can be referred as a nerve centre or backbone of the enterprise.

Sales plan is the infrastructure of profit plan as other plans of profit plan depend upon the sales plan. The main purpose of the study in this chapter is to examine and analyze the budgeted and actual sales plan adopted by CHPCL.

The study is focused on two types of sales plans. The first is long-range sales plan and second is short-range sales plan. CHPCL has applied both long-term and short-range sales plans.

This study has focused mainly on budgeted and actual sales of CHPCL. Other related figures of previous years are also presented and analyzed to know the overall economic and financial trends; and some statistical tools to estimate the possible future trend of the corporation. For the purpose of this study, it covers the data of fiscal years from 2065/066 to 2069/070.

4.2 Revenue planning Of CHPCL

Revenue planning is the foundation of planning in business organization. It is primary step in developing the overall budget producer and it is the primary source of cash and all other functional budgets are prepare on the basis of sales budget. The sales plan is that step which opens the door of financial plan. It is an estimation of sales for uncertain period of future. When actual sales are not from the planned sales then it is known as good plan. For this, sales budget preparation should be done in realistic ground. If sales budget is not realistic all other budgets will not be realistic.

Sales plan is prepared on the basis of sales forecast, generally sales plan and sales forecast are used as a same sense but they are not same. A sales forecast has to be translated in to sales plan and various factors have to be taken in to consideration. Sales plan preparation involve the following four inter-related step.

1. The sales forecast.
2. The marketing plan.
3. The advertisement and expenses plan.
4. Selling expenses plan.

Revenue planning is the most important factor for the successfully running for the organization. To achieve the corporate goal the sales plan or revenue plan is to be made.

CHPCL prepares the revenue plan on the basis of following factor.

1. Historical data of sales
2. Capacity available of CHPCL

The starting point for the evaluation of existing revenue planning practices is to analyze past trends of planed sales revenue and its achievement. CHPCL prepares short term planning and long term planning. CHPCL has been preparing revenue planning in units and rupees from its earlier stages of budgeting. The table 4.1 shows the budgeted sales and achievements in units and rupees from the fiscal year 2065/66 to 2069/70.

Table 4.1

Sales Target and Achievements

F/Y 2065/66 to 2069/70

Fiscal Year	Budgeted(Units in (kWh))	Actual (Units in (kWh))	Achievement %	Budgeted (In Rs)	Actual (In Rs)	Achievement %
2065/66	137,585,000	142,127,000	103.301232	855213421.2	883,446,000	103.301232
2066/67	140,893,000	141,565,200	100.4770996	882355186.6	886,564,900	100.4770996
2067/68	132,795,349	141,856,000	106.8230183	828516188.6	885,046,000	106.8230183
2068/69	142,871,000	145,780,513	102.0364616	882663543.2	900,638,647	102.0364616
2069/70	148,227,000	149,649,210	100.9594811	959348737.5	968,553,507	100.9594811

Sources: Annual Report of CHPCL, from 2065/66 to 2069/70.

The table no. 4.1 signifies that the budgeted and the actual sales budget of CHPCL. In the FY 2065/66 the budgeted sales of CHPCL was 137,585,000 kWh and gradually increased up to the FY 2069/70, which was 148,227,000 kWh except on 2067/68, on the other side the actual sales of the CHPCL in FY 2065/66 was 142,127,000 kWh which was increased up to the FY 2069/70 and reached to 149,649,210 kWh. The annual achievement was not less than 100.47 percent. The targeted sales units were less than the actual sales units. The achievement of actual sales kWh was fluctuating every year.

In the same way in the FY 2065/66 the budgeted sales was Rs 855213421.2. Annual targeted sales budget was increasing from the FY 2065/66 up to the FY 2069/070. In FY 2069/070 the budgeted sales was Rs 959348737.5. Actual sales amount was also in increasing trend except in the FY 2067/68. In the FY 2065/66 the actual sales was Rs 883,446,000, which is 103.30 percent of budgeted sales. Likewise in the FY 2069/070 the actual sales were Rs 968,553,507, which is 100.95 percent of budgeted sales amount.

It shows the in compare to sales budget sales performance are satisfactory. When analyze the target and actual sales figure of each year, it can say that targets are mainly based on historical sales performance. From the table it can be said that actual sales achievement of CHPCL is consistent with budgeted sales the achievement in sales unit and revenue is not less than about 100.47%. The sales plan of CHPCL is systemic and satisfactory it clear that the performance of planning section of CHPCL is satisfactory and it prepares the sales plan on realistic basis and previous year's sales performance.

4.3 Revenue trends of CHPCL

Revenue plan is the key factor in profit planning it is also the initial stage of overall budgeting procedure. It is a major base for preparing all other budgets. It is prepared by product, time, department and region wise. In this budget sales revenue is estimate for certain period. If revenue plan is wrongly prepared all other plans would be wrong. So, preparation sales budget needs the knowledge of aspects connected with that budget.

Normally, revenue plan are divided into two types on the basis of time coverage. If sales plan or budget is prepared for a year, the plan is called tactical and if it is prepared for more than one year is called strategic. It is prepared by quarterly, monthly and yearly basis.

The starting point for the evaluation of existing revenue planning practices is to analyze past trends of planned sales revenue and its achievement. Table 4.2 shows CHPCL's sales unit and revenue trends (both planned revenue and actual revenue) for the period of 2065/66 to 2069/70.

Table 4.2

Revenue trends of CHPCL

F/Y 2065/66 to 2069/70

Year	**Budgeted Sales**		**Increase**		**Actual Sales**		**Increase**	
	Units (kWh)	Amount in Rs	Units (kWh)	Amount in Rs	Units (kWh)	Amount in Rs	Units (kWh)	Amount in Rs
2065/66	137,585,000	855213421	0	0	142,127,000	883,446,000	0	0
2066/67	140,893,000	882355187	3,308,000	27,141,765	141,565,200	886,564,900	-561,800	3,118,900
2067/68	132,795,349	828516189	-8,097,651	-53,838,998	141,856,000	885,046,000	290,800	-1,518,900
2068/69	142,871,000	882663543	10,075,651	54,147,355	145,780,513	900,638,647	3,924,513	15,592,647
2069/70	148,227,000	959348738	5,356,000	76,685,194	149,649,210	968,553,507	3,868,697	67,914,860

Sources: Annual Report of CHPCL, from 2065/66 to 2069/70.

It is cleared from the table 4.2 that in the year 2066/67 planned revenue was increased by 3.17% and sales unit 2.40% respectively which was the result of increase in normal rate.

In fiscal year 2067/068 planned growth in sales unit and revenue was declined by 5.75% and 6.10% respectively. The achievement was greater than planned and was satisfactory. In fiscal year 2068/069 planned growth in sales unit and revenue was 7.59% and 6.54% respectively. The achievement was greater by 2.77 % and was satisfactory too.

In final fiscal year 2069/070 the growth in budgeted sales unit and revenue was 3.75% and 8.69% respectively which was achieved, and was satisfactory.

In order to find out the nature of variability of budgeted and actual sales of different years, it is necessary to find out the different statistical calculation which are arithmetic mean, standard deviation and co-efficient of variance of actual and planned sales figure of CHPCL for the five year from the FY2065/66 to 2069/070. The details of these statistical tools result are presented as follows.

Table 4.3

Budgeted and Actual Sales Relationship

F/Y 2065/66 to 2069/70

Statistical Tools	Budgeted Sales (kWh)	Actual Sales (kWh)	Budgeted Sales revenue(million)	Actual Sales Revenue(million)
Mean (X)	140,474,270	144,195,585	881,619,415	904,849,811
S.D. (σ)	5773607.64	3497343.62	48889437	36264813.6
C.V.	4.11008197	2.42541658	5.545413	4.00782684

Sources: Annual Report of CHPCL, from 2065/66 to 2069/70 & Excel formula

The table no. 4.3 shows the result of statistical calculation. The calculated mean of budgeted sales is 140,474,270 kWh where as actual sales is 144,195,585 kWh. Coefficients of variation of budgeted sales are 4.11 percent and for actual sales is 2.425 percent. The variation of budgeted sales is greater than actual sales that of due to the high fluctuation in sales of the year 2067/068. Deviated value of budgeted sales is 5773607.64 which is greater than actual sales S. D. 3497343.62 kWh.

The calculate mean of actual sales revenue is Rs 904,849,811 which is greater than that of budgeted. The C.V. of budgeted sales revenue is only 5.545 percent but the C.V. of actual sales revenue is 4.007 percent. The standard deviations of sales revenue are 48889437 and 36264813.6 respectively in budgeted and actual sales revenue.

From the above statistical analysis it found that the actual sales are superior then budgeted sales. From the statistical decision it can be said that actual sales is consistent. For such industry, which is based upon PPA variation between budgeted and actual figure should be at its minimum and this company was capable. The budgeted sales in rupees and units are show with the help of following figure:-

Figure 4.1

Budgeted and Actual Sales Revenue of CHPCL

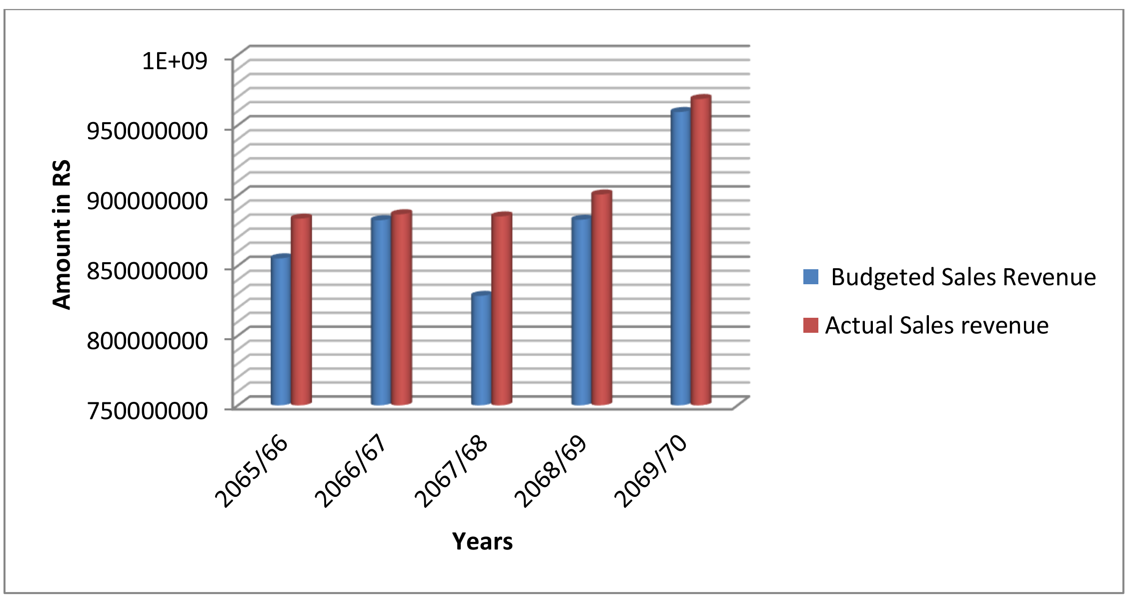
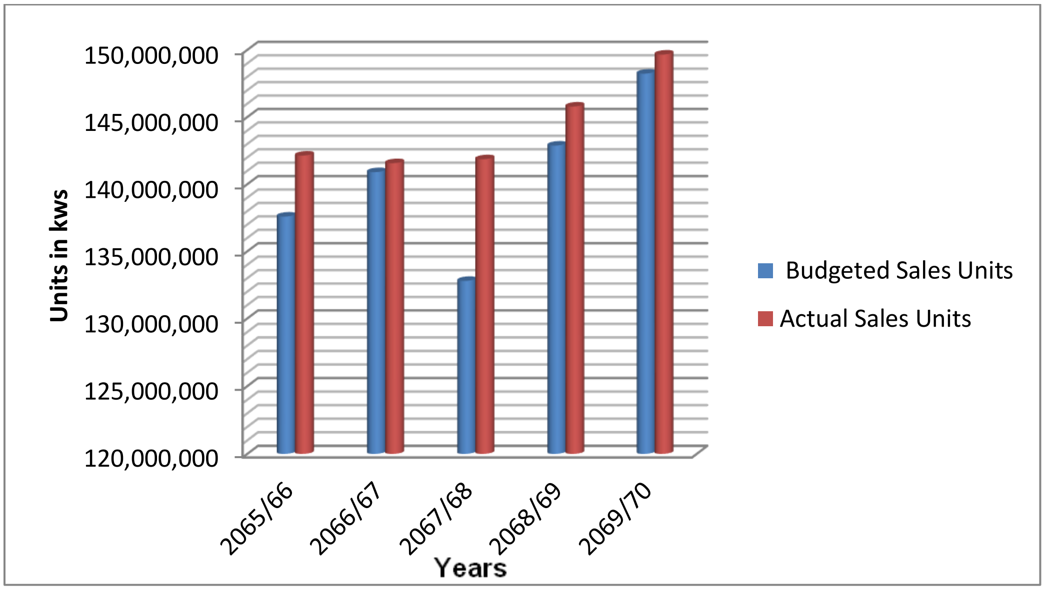


Figure 4.2

Budgeted and Actual Sales units of CHPCL



The annually graphical presentation of study period shows that the budgeted sales rupees and unites kWh as well as actual sales rupees and unites kWh are increasing gradually up to FY 2069/070.

Another statistical tool to analysis the relationship between actual sales and budgeted sales is correlation of coefficient. It can be finding with the help of Karl Pearson Correlation Coefficient and it is denoted by (r). This coefficient of correlation measures the degree of association between budgeted and actual sales figures. If an actual sale is as like as budgeted sales, it is proved that there are positive correlations but it is not as like as budgeted, it is negative correlation. To find out of the value of (r) the budgeted sales has assumed as independent (X) and actual sales as dependent variable (Y).

Table 4.4

Correlation Coefficient between Actual and Budgeted Sales in Units

F/Y 2065/66 to 2069/70

(Units in kWh 000000)

in (kWh) (000000)					
Year	Budgeted sales (X)	Actual Sales(Y)	X^2	Y^2	XY
2065/66	137.585	142.127	18929.63223	20200.08413	19554.5433
2066/67	140.893	141.565	19850.83745	20040.70585	19945.54572
2067/68	132.795	141.856	17634.60472	20123.12474	18837.81703
2068/69	142.871	145.781	20412.12264	21251.95797	20827.80767
2069/70	148.227	149.649	21971.24353	22394.88605	22182.05345
N=5	∑X=702.371	∑Y=720.978	$\sum X^2$=98,798.441	$\sum Y^2$=104,010.759	∑XY=101,347.767

Sources: Annual Report of CHPCL, From 2065/66 to 2069/70.

$$\text{Correlation (r)} = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \times \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 * 101{,}347.767 - (702.371 * 720.978)}{\sqrt{5 * 98{,}798.441 - 702.371^2} * \sqrt{5 * 104{,}010.759 - 720.978^2}}$$

= 0.853

***Calculation of probable error (P.E)**

$$\text{P.E} = 0.6745 * \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 * \frac{1 - 0.853^2}{\sqrt{5}} = 0.0821655 = 0.0821655 * 6 = 0.492993$$

Table 4.5

Correlation Coefficient between Actual and Budgeted Sales Revenue

F/Y 2065/66 to 2069/70

(In Rs 000000)

Year	Budgeted sales (X)	Actual Sales(Y)	X^2	Y^2	XY
2065/66	855.213	883.446	731389.9958	780476.8349	755534.8761
2066/67	882.355	886.565	778550.6753	785997.3219	782265.1378
2067/68	828.516	885.046	686439.0748	783306.4221	733274.9387
2068/69	882.664	900.639	779094.9305	811149.9725	794960.8993
2069/70	959.349	968.554	920350.0001	938095.8959	929180.5841
N=5	∑X=4,408.097	∑Y=4,524.249	$\sum X^2$3,895,824.677	$\sum Y^2$4,099,026.447	∑XY=3,995,216.436

Sources: Annual Report of CHPCL, From 2065/66 to 2069/70.

$$\text{Correlation (r)} = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \times \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 * 3{,}995{,}216.436 - (4{,}408.097 * 4{,}524.249)}{\sqrt{5 * 3{,}895{,}824.677 - ,408.097^{2}} \quad * \quad \sqrt{5 * 4{,}099{,}026.447 - 4{,}524.249^2}}$$

= 0.924

***Calculation of probable error (P.E)**

$$P.E = 0.6745 * \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 * \frac{1-0.924^2}{\sqrt{5}}$$

= 0.0441= 0.0441 * 6 = 0.2646

Table 4.6

Correlation Coefficient Analysis Table

For Actual and Budgeted Sales Unit and Revenue

Correlation Coefficient budgeted and actual	Sales Unit	0.853
Correlation Coefficient budgeted and actual	Sales Revenue	0.924
Probable error budgeted and actual	Sales Unit	0.0821
Probable error budgeted and actual	Sales Revenue	0.0441

Sources: Appendix I

The calculated value of correlation (r) of budgeted and actual sales units and revenue are 0.853 & 0.924 respectively. It proves that there is highly positive correlation between independent variable and dependent variable. The significant correlation indicates that the actual condition and the budgeted condition of CHPCL are proved to be signification. For this significance of (r) should be tested by the help of probable error. While calculation six times probable errors (PE) from the above value it will be 0.492993 in units and 0.2646 in revenue. It means six times of probable error is less than r in both case. Thus the value of r is significant and proved the highly positive correlation.

Likewise, another important tool is least square method; it is also known as time series analysis. It is an important factor for the study of trend of actual sales. A straight-line trend will show the relationship between year and actual sales of the relevant year. To fit this straight-line trend, the time factor should be considered as an independent factor and sales is considered as a dependent factor of this time. This straight line of actual sales (Y) is express following way: -

Where,

Y= Actual sales figure

X= Time

a= Fixed value

b= Variable value

Let the straight line trend be

Y_C=a +b x……………. (I)

Table 4.7

Least square spreadsheet actual sales of CHPCL

F/Y 2065/66 to 2069/70

(IN kWh 000000)

	Actual sales (Y)	**x=X-2067/68**	**X^2**	**X y**	yc
2065/66	142.127	-2	4	-284.254	140.3436
2066/67	141.565	-1	1	-141.5652	142.2696
2067/68	141.856	0	0	0	144.1956
2068/69	145.781	1	1	145.780513	146.1216
2069/70	149.649	2	4	299.29842	148.0476
N=5	∑y=720.978	∑x=0	$\sum X^2$=10	∑xy= 19.260	

Sources: Annual Report of CHPCL, From 2065/66 to 2069/70 & Appendix II.

Since ∑x=0, so a = $\frac{\sum y}{N} = \frac{720.978}{5}$ = 144.1956

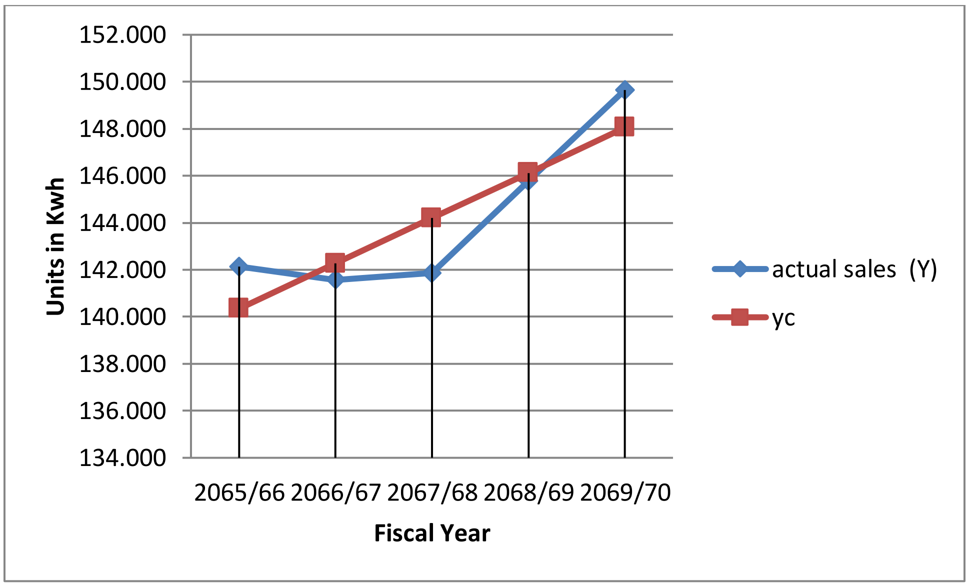
$$b = \frac{\sum xy}{\sum x^2} = \frac{19.260}{10} = 1.926$$

Substituting the value of a and b in (I), the equation of the trend line is

$$Y_C = 144.1956 + 1.926\ x$$

This trend line shows the highly positive sales units for the future. The annual rate of increase is 1,926,000,000. The trend line of actual sales and trend value is shown below.

Figure 4: Actual Sales of CHPCL



On this figure the actual sales of CHPCL is in increasing. During the period, its rate of growth rate is slightly negative in 2066/67 after that growth rate gone highly and reached to top where the trend line is straight.

4.4 Production Budget of CHPCL

Production budget is second step in developing profit plan. Without production budget profit planning is never completed. This budget is prepared on the basis of sales budget, if sales is high this budget also high or vice-versa. For the purpose of the formulation of production plans, the sales budget is translated in appropriate production plan. One the other way, production is based on budgeted sales volume and desire inventory level. The responsibility for preparation and operation of production budget lies with production manager. Therefore, sales budget needs to translate into production budget. Normally in respect of public utility concern like CHPCL, production budget will be prepared for long and short both periods. CHPCL uses the following methods while preparing production budget.

1. On the basis of load forecast.
2. On the basis of available capacity.

CHPCL is the utility concern. It prepares the power generation and the production budget. In term of hydropower production, CHPCL cannot be bear opening and closing inventory because power should not be success to store. CHPCL prepared the production budget for each fiscal year. The overall responsibility of production budget goes to production directorate.

The following table shows the detailed production target and achievement of CHPCL from FY 2065/66 to 2069/070.

Table 4.8

Budgeted Production and Actual Production

F/Y 2065/66 to 2069/70

(Units in kWh)

Fiscal Year	Budgeted Production in kWh	Actual Production in kWh	Achievement %
2065/66	137,585,000	146,220,000	106.27612
2066/67	140,893,000	148,132,000	105.137942
2067/68	132,795,349	150,110,000	113.038597
2068/69	142,871,000	156,083,000	109.247503
2069/70	148,227,000	154,019,000	103.90752

Sources: Annual Report of CHPCL, From 2065/66 to 2069/70.

Figure 4.5

Budgeted Production and Actual Production

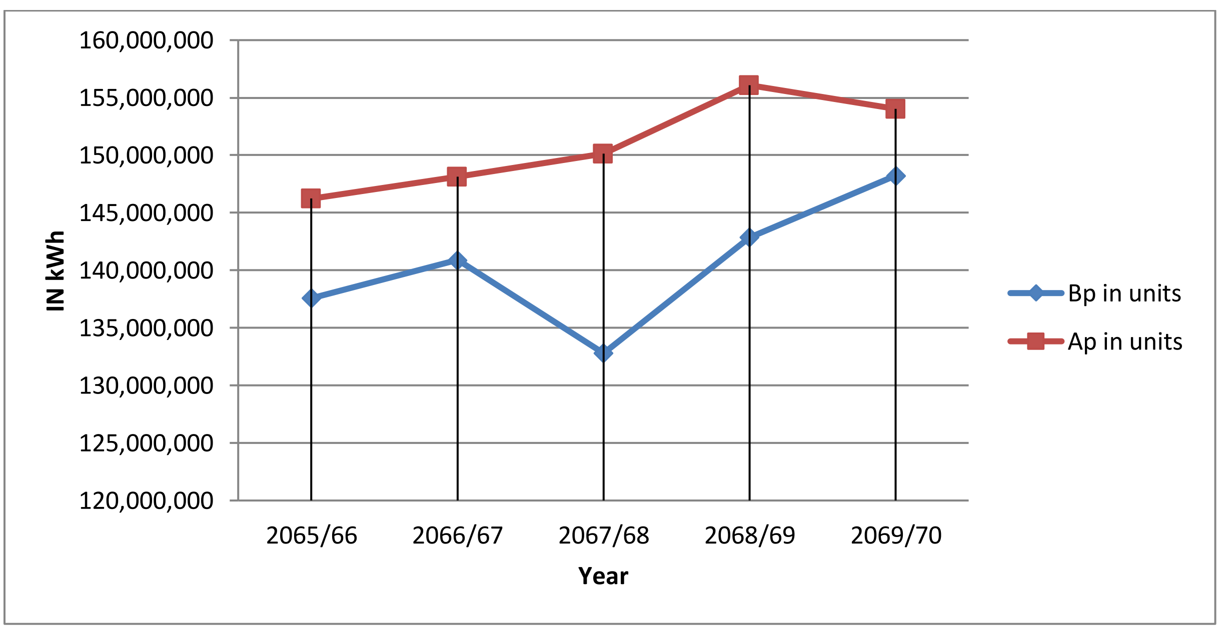
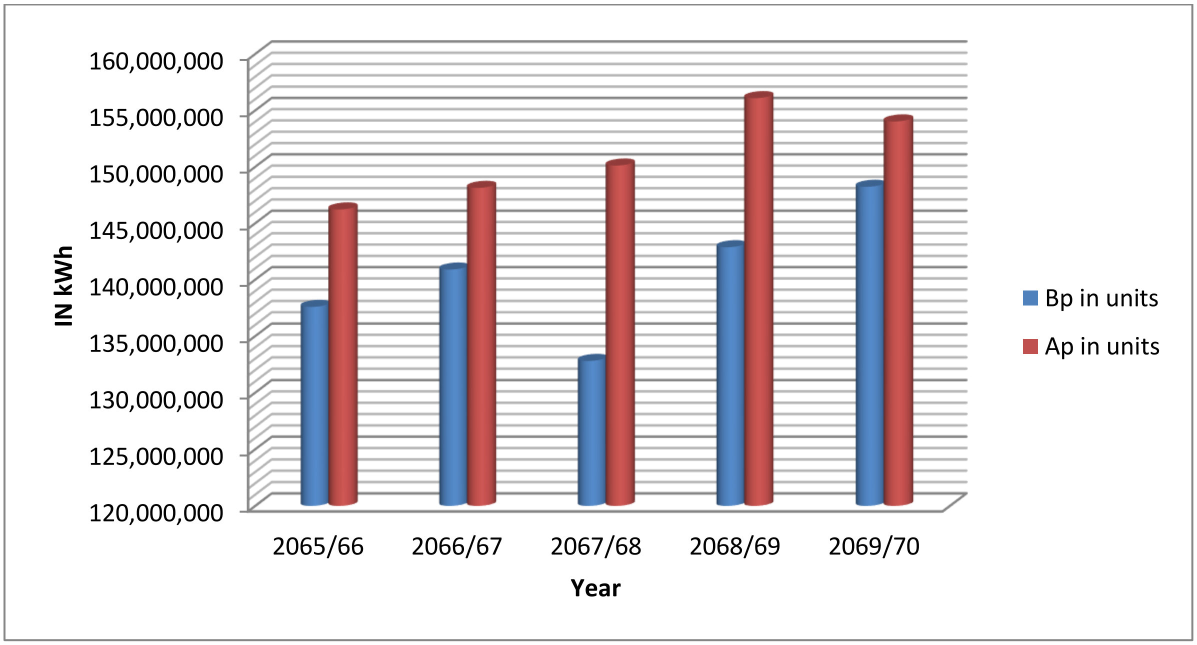


Figure 4.6

Budgeted Production and Actual Production



The table No. 4.8 and figure No 4.5 and 4.6 shows that the overall production budget and it actual condition. In the FY 2065/66 the whole achievement of CHPCL was 106.36 percent, which is favorable for the Company. Likewise in the FY 2066/67 budgeted production was 140,893,000 units in kWh and the actual production was 148,132,000 kWh units which was 105.13 percent progress of CHPCL. But In the FY 2067/68 budgeted production was decreased and become 132,795,349 kWh units where the actual production was 150,110,000 kWh units, which is 113.038 percent achievement of CHPCL planning. In the same way at the last fiscal year of study period the budgeted production is increased where the actual production units is fluctuated highly and become 154,019,000 kWh units but which is above 100 percent achievement of CHPCL in production sector.

It seemed fluctuation in the achievement and budgeted production but continuous increasing in actual production. The achievement was higher than planned so the production budget of CHPCL was satisfactory.

The statistical tool to analysis the relationship between actual sales and actual production is correlation of coefficient. It can be finding with the help of Karl Pearson Correlation Coefficient and it is denoted by (r). This coefficient of correlation measures the degree of association between actual sales and actual production figures. If an actual sale is as like as actual production, it is proved that there are positive correlations but it is not as like as actual, it is negative correlation. To find out of the value of (r), the actual production has assumed as independent (X) and actual sales as dependent variable (Y).

Table 4.9

Correlation Coefficient in Actual Production and Actual Sales

F/Y 2065/66 to 2069/70

(Units in kWh 000000)

Year	Actual Production (X)	Actual Sales(Y)	X^2	Y^2	XY
2065/66	146.220	142.127	21380.2884	20200.0841	20781.8099
2066/67	148.132	141.565	21943.0894	20040.7059	20970.3362
2067/68	150.110	141.856	22533.0121	20123.1247	21294.0042
2068/69	156.083	145.781	24361.9029	21251.958	22753.8598
2069/70	154.019	149.649	23721.8524	22394.8861	23048.8217
N=5	$\sum X$=754.564	$\sum Y$=720.978	$\sum X^2$=113,940.145	$\sum Y^2$=104,010.759	$\sum XY$=108,848.832

Sources: Annual Report of CHPCL, From 2065/66 to 2069/70.

$$\text{Correlation (r)} = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \times \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 * 108{,}848.832 - (754.564 * 720.978)}{\sqrt{5 * 113{,}940.145 - 754.564^2} * \sqrt{5 * 104{,}010.759 - 720.978^2}}$$

$$= 0.770382$$

***Calculation of probable error (P.E)**

$$P.E = 0.6745 * \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 * \frac{1-0.770382^2}{\sqrt{5}}$$

= 0.122622

$\therefore$ $6 \times P.E$ = 0.122622 * 6 = 0.735734

Thus, r=0.770382 > 6×P.E so the value of r is significant.

4.7 Profit and Loss account of CHPCL

The profit and loss account of the company can be deferred as a final account which summarized the incomes and gains earned and expenses incurred during the financial year. Therefore, profit and loss account is prepared to ascertain the operating results of a company in term of net profit or loss. The profit and loss account determines net income or loss by matching incomes and expenses accrued during a particular financial year.

CHPCL also prepared profit and loss account at the end of every fiscal year. It shows the final conclusion of the operation of fiscal year.

The following table shows the profit and loss of CHPCL from FY 2065/66 to 2069/070.

Table 4.10

Detail Profit and Loss Account of CHPCL

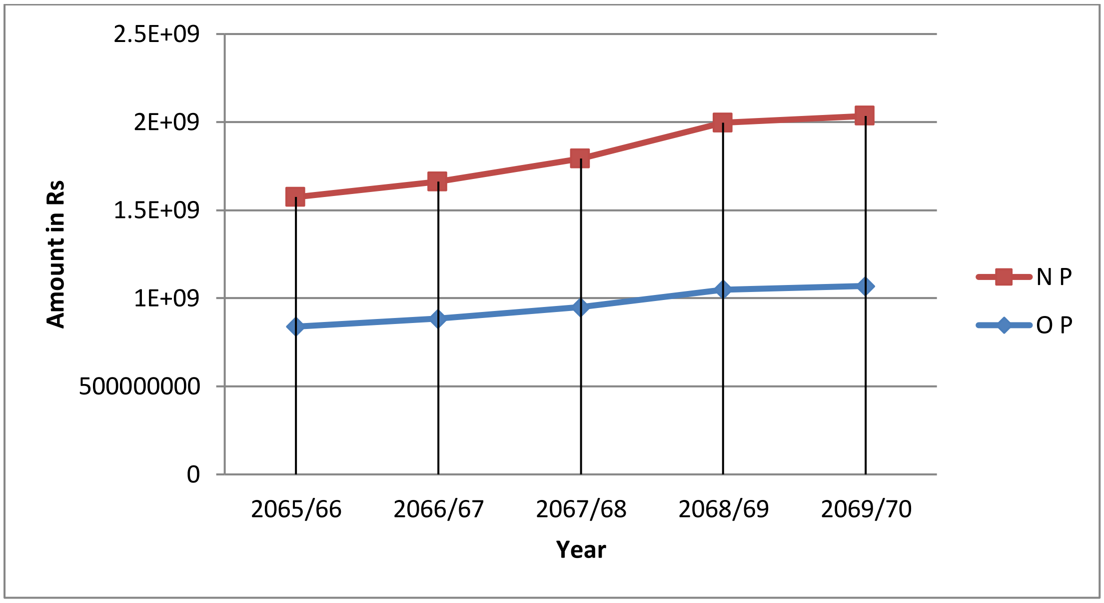
(In Rs)

Particular	2065/66	2066/67	2067/68	2068/69	2069/70
Sales income	883,446,000	886,564,900	885,046,000	900,638,647	968,553,507
Cost of sales	(58131405.46)	-72734490	(74,098,641.29)	(102,758,705)	(90,843,924)
Gross Profit	**825314590.61**	**813830417.1**	**810,947,719.35**	**797,879,941**	**877,709,583**
Other income	1359747.43	171300	220,734.74	2,681,613	2,765,095
Interest income	50760753.93	108941205.5	190,520,742.26	301,285,593	254,042,249
Administration expenses	(38506698.76)	-39194617.6	(52,084,973.19)	(51,906,443)	(64,751,926)
Profit from Operation	**838928393.21**	**883748305**	**949,604,223.17**	**1,049,940,704**	**1,069,765,001**
Interest Expenses					
Depreciation	(103567873.8)1	-104732089	(106,217,662.06)	(106,700,572)	(107,093,303)
Deferred Tax		(1584369.00)	(247,221.80)		
Profit Before Tax	**735360519.40**	**777431846.8**	**843,139,339.31**	**943,240,132**	**962,671,698**
Income tax provision			0	2,080,504	2,374,108
Profit After tax	**735360519.40**	**777431846.82**	**843,139,339.31**	**945,320,636**	**965,045,806**

Sources: Annual Report of CHPCL, From 2065/66 to 2069/70.

Figure 4.7

Detail Profit and Loss of CHPCL



The above table and figure are profit and loss account of CHPCL, which already showed company is on huge amount of gain. It is increasing trend. On other hand the operating profit is also highly positive it is increase till 2069/070 and reached to Rs 1,069,765,001 from Rs 838928393.21 in the fiscal year 2065/066. After adjusting depreciation and interest the operating profit is also positive so in every year NPAT is positive.

4.10 Variance Analysis

The term variance refers to the deviation of the actual from the budget due to various causes. Variance analysis is the process of calculating the deviation of actual from budgeted and of inter predating the result. Variance analysis helps to ascertain the magnitude of each of the variance and causes of variance so that corrective actions can be taken. In variance analysis, when actual results are better than budgeted, favorable variance arises. When actual results are not better than budgeted unfavorable variance arises.

Table 4.11

Sales variance of CHPCL

(Unit in kWh)

Fiscal Year	Budgeted Sales	Actual Sales	Variance	Remarks
2065/66	137,585,000	142,127,000	-279,712,000	Favorable
2066/67	140,893,000	141,565,200	-282,458,200	Favorable
2067/68	132,795,349	141,856,000	-274,651,349	Favorable
2068/69	142,871,000	145,780,513	-288,651,513	Favorable
2069/70	148,227,000	149,649,210	-297,876,210	Favorable

Sources: Annual Report of CHPCL, From 2065/66 to 2069/70.

Above table no 4.11 shows that sales units variance of CHPCL. All fiscal year sales unit variance is favorable. Responsible department should be held accountable for this favorable sales variance in the CHPCL and take continuous better in future also.

4.11 Major Finding

The major findings after the detail analysis of managerial budgeting of CHPCL are presented below:-

- CHPCL's sales achievement with NEA has exceeded to the planned sales during the study period in terns on units (i.e. 103.30%, 100.47%, 106.82%, 102.363%, and 100.95% in 2065/66 to 2069/70 respectively.

- CHPCL's sales achievement with NEA has exceeded to the planned sales during the study period in terns on amount (i.e. 103.30%, 100.47%, 106.82%, 102.363%, and 100.95% in 2065/66 to 2069/70 respectively.

- CHPCL is in more satisfaction position in sales volume is incising every year.
- Main income source of CHPCL is sale to electricity.
- The calculated mean of budgeted sales is 140,474,270 kWh where as actual sales is 144,195,585 kWh. Coefficients of variation of budgeted sales are 4.11 percent and for actual sales is 2.425 percent.
- The standard deviations of sales revenue are 48889437 and 36264813.6 respectively in budgeted and actual sales revenue.
- The calculated value of correlation (r) of budgeted and actual sales units and revenue are 0.853 & 0.924 respectively. It proves that there is highly positive correlation between independent variable and dependent variable.
- This trend line shows the highly positive sales units for the future. The annual rate of increase is 1,926,000,000.
- CHPCL has a high degree of positive correlation coefficient between budgeted sales and actual sales with NEA (i.e. 0.924). It means actual sales change in same direction of budgeted sales.
- CHPCL has positive correlation coefficient between budgeted production and actual production with NEA (i.e. 0.770382). It means actual production change in same direction of budgeted production.
- All fiscal year sales unit variance is favorable.
- The main expenditure of CHPCL is power plant expenses, distribution expenses, management and technical support expenses and administrative expenses, loss on fixed assets, depreciation, and staff cost.

CHAPTER-V

SUMMARY, CONCLUSIONS AND RECOMMEDATIONS

5.1 Summary

Planning is primary function of the management process. Planning is the process of setting goals and objective and translating them into activities and resources required for the accomplishment within a specified time horizon. A budget is quantitative expression of a plan of action and an aid to co-ordination and control. Budgets may be formulated for the organization as a whole or for a sub unit. Budget, basically, are forecasted financial statements formal expressions of managerial plans. They are target that encompass all phases of operations including sales, production, purchasing, and manpower and financing. But in this study we have taken consideration only revenue plan of Chilime Hydropower Company Limited.

Revenue (sales income mainly)) of the company plays most important roles in profitability. Without revenue we can’t imagine the profit of an organization. In market, without profit an organization cannot survive in future. The sales plan plays main role in financial plans in an organization. It estimates about the sales in future. All other budgets are built up on the basis of the sales budget.

It will be easy for the enterprise to decide how much products is sold by the organization in current year, and how much will be sold in future. It helps to know about production plan, how much the products should be produced by organization (if manufacturing company), or how much goods should be brought from the manufacturer (if non-manufacturing company) to sell in the market.

The sales manager is directly responsible for the preparation and exaction of this budget. When actual sales are near to the targeted sales, the planned sale is known as good plan. The efficiency of a planner or planning expert can be evaluated from the comparison between actual and budgeted (planned) sales.

This study has examined the “Revenue Plan of Chilime Hydropower Company Limited” that has been taken as representative of public enterprise of Nepal. The study also analyzes the sales budgeting process as tools of profit planning in CHPCL.

Public enterprises play important role in the industrialization activities in the developing country like Nepal. Nepal is a landlocked country; we need to import lots of things from India and from third countries too. In Nepal, we have some certain industries which are not enough to fulfill the demand of the people.

CHPCL is selected as representative enterprise for this study. This research work tries to analyze and examine the practice, procedure and technique of certain question state in the statement of problem.

Chilime Hydro Power Company Limited is a public company established with the objective to work on all the generation, transmission and distribution systems. It carries out feasibility study, construction operation and management of small and middle hydropower project. It makes also an agreement between the company and the organization or individual to sale and purchase electricity. Besides, this gives and takes the work in contract between company and the different organization.

This study has been organized in five main chapter i.e. introduction, literature review, research methodology, data presentation and analysis, and final summary, conclusions and recommendation.

The secondary data have been used for analysis. Statistical tools like percentage, graph, mean, standard deviation; variance, correlation and trend analysis have been used to analyze the data.

Detail presentation of the data relating to CHPCL consists of presentation of budgeted and actual sales, the condition of present sales and applies sales policy. The actual sales, budgeted sales and profit\loss of CHPCL have been analyzed with various statistical tools wherever necessary.

5.2 Conclusions

After analyzing the present practice in CHPCL, the conclusions are made as follows:

- CHPCL is the private profit oriented company. The majority of Company's ownership with 51 % shares belongs to NEA. The remaining 49% shareholding belongs to general public which include 10% shares from local people.
- CHPCL has been practicing of preparing budgets or plan since its establishment. It is able to prepare systematic, scientific, and appropriate budgets by considering relevant factors, polices and ides.
- CHPCL's sales achievement has exceed to the planned sales during the study period in both units and Revenues
- It found that the actual sales are superior then budgeted sales and from the statistical decision it can be said that actual sales is consistent.
- The statistical tools show that there is perfect correlation between budgeted and actual sales as well as actual production with budgeted production and C.V. indicate that there is more variation of budgeted sales than actual sales and other hand budgeted production is more variable than actual production.
- Actual sales revenue is increasing every fiscal year of study period and it reached up to Rs 968,553,507 in the FY 2069/070. Likewise, actual production also increasing trend and it reaches up to 154,019,000 kWh in the FY 2069/070.

- The financial performance is satisfactory level because all FY year seems high profit.
- CHPCL has sell electricity to NEA under PPA.
- Profit planning and control has two side, one is revenue planning and other is cost planning. If these both are planned properly, profit will be automatically planned. In CHPCL revenue planning and cost planning are systematically and scientifically.
- CHPCL is in more satisfaction position in sales volume is incising every year.
- Main income source of CHPCL is sale to electricity.
- The main expenditure of CHPCL is power plant expenses, distribution expenses, management and technical support expenses and administrative expenses, loss on fixed assets, depreciation, and staff cost.

5.3 Recommendations

Base on the above study, the following suggestions and recommendations are outlined to improve the formulation and implementation of profit planning and controlling system.

- CHPCL should control the leakage of electricity to achievement the sales target.
- CHPCL should prepared income and expenditure budget to present the actual financial condition of the company.
- CHPCL should try to minimize its overall expenditure to maximize profit
- Loss of the electricity should be controlled. Transmission and distribution line should be refurbished and modernized to control the leakage
- CHPCL should clearly classify the costs as fixed, variable and semi-variable to assist to plan production and its operation.

- CHPCL should maintain its periodic performance reports systematically and also should take correction action if necessary.
- The management should give training and take carrot and stick strategy for good performance.
- To increase the production of electricity CHPCL should change upgrade their hydropower Project.
- It is suggested that CHPCL should invest in other hydro projects to increase the production and profit.

- CHPCL should controlled the frequently line cut off used by new and modernized machine.
- In CHPCL, planning should be communicated to lower level management and coordination among them should be established.

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Appendix-I

Correlation Coefficient between Actual and Budgeted Sales in Units

F/Y 2065/66 to 2069/70

(Units in kWh 000000)

Year	Budgeted sales (X)	Actual Sales(Y)	X^2	Y^2	XY
2065/66	137.585	142.127	18929.63223	20200.08413	19554.5433
2066/67	140.893	141.565	19850.83745	20040.70585	19945.54572
2067/68	132.795	141.856	17634.60472	20123.12474	18837.81703
2068/69	142.871	145.781	20412.12264	21251.95797	20827.80767
2069/70	148.227	149.649	21971.24353	22394.88605	22182.05345
N=5	$\sum X$=702.371	$\sum Y$=720.978	$\sum X^2$=98,798.441	$\sum Y^2$=104,010.759	$\sum XY$=101,347.767

Sources: Annual Report of CHPCL, From 2065/66 to 2069/70.

$$\text{Correlation (r)} = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \times \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 * 101{,}347.767 - (702.371 * 720.978)}{\sqrt{5 * 98{,}798.441 - 702.371^2} * \sqrt{5 * 104{,}010.759 - 720.978^2}}$$

= 0.853

***Calculation of probable error (P.E)**

$$\text{P.E} = 0.6745 * \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 * \frac{1 - 0.853^2}{\sqrt{5}} = 0.0821655 = 0.0821655 * 6 = 0.492993$$

Correlation Coefficient between Actual and Budgeted Sales Revenue

F/Y 2065/66 to 2069/70

(In Rs 000000)

Year	Budgeted sales (X)	Actual Sales(Y)	X^2	Y^2	XY
2065/66	855.213	883.446	731389.9958	780476.8349	755534.8761
2066/67	882.355	886.565	778550.6753	785997.3219	782265.1378
2067/68	828.516	885.046	686439.0748	783306.4221	733274.9387
2068/69	882.664	900.639	779094.9305	811149.9725	794960.8993
2069/70	959.349	968.554	920350.0001	938095.8959	929180.5841
N=5	$\sum X$=4,408.097	$\sum Y$=4,524.249	$\sum X^2$3,895,824.677	$\sum Y^2$4,099,026.447	$\sum XY$=3,995,216.436

Sources: Annual Report of CHPCL, From 2065/66 to 2069/70.

$$\text{Correlation (r)} = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \times \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 * 3{,}995{,}216.436 - (4{,}408.097 * 4{,}524.249)}{\sqrt{5 * 3{,}895{,}824.677 - ,408.097^2} \quad * \quad \sqrt{5 * 4{,}099{,}026.447 - 4{,}524.249^2}}$$

$$= 0.924$$

***Calculation of probable error (P.E)**

$$\text{P.E} = 0.6745 * \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 * \frac{1 - 0.924^2}{\sqrt{5}}$$

= 0.0441= 0.0441 * 6 = 0.2646

Appendix-II

Calculation of Trend Analysis of Actual Sales

To analyze the trend of forecasting sales, straight line trend by least square method is going to be fitted. For this, let us assume that the fiscal year be X and the forecasted sales be Y.

Let the straight line trend be

Y=a +b x……………. (I)

	Actual sales (Y)	**x=X-2067/68**	**X^2**	**X y**	yc
2065/66	142.127	-2	4	-284.254	140.3436
2066/67	141.565	-1	1	-141.5652	142.2696
2067/68	141.856	0	0	0	144.1956
2068/69	145.781	1	1	145.780513	146.1216
2069/70	149.649	2	4	299.29842	148.0476
N=5	∑y=720.978	∑x=0	$\sum X^2$=10	∑xy= 19.260	

Sources: Annual Report of CHPCL, From 2065/66 to 2069/70.

Since ∑x=0, so $a = \frac{\sum y}{N} = \frac{720.978}{5} = 144.1956$

$$b = \frac{\sum xy}{\sum x^2} = \frac{19.260}{10} = 1.926$$

Substituting the value of a and b in (I), the equation of the trend line is

$$Y_C = 144.1956 + 1.926\ x$$

For trend values:

When x= -2, $Y=144.1956 + 1.926 \times (-2) = 140.3436$

x= -1, $Y=144.1956 + 1.926 \times (-1) = 142.2696$

x= 0, $Y=144.1956 + 1.926 \times (0) = 144.1956$

x= 1, $Y=144.1956 + 1.926 \times (1) = 146.1216$

x= 2, $Y=144.1956 + 1.926 \times (2) = 148.0476$

For the estimation in 2070/71

X=2070/71

I.e. x= (2067/68-2070/71) =3 & so on.

∴ Expect sales units in 2070/71 (Y) = 144.1956 + 1.926 * 3 = 833.162000000

In 2071/72 =144.1956 + 1.926 *4 = 1110.88000000

In 2072/73=144.1956 + 1.926 * 5 =1388.60000000

In 2073/74=144.1956 + 1.926 * 6 =1666.32000000

In 2074/75=144.1956 + 1.926 * 7 = 1944.045000000