# A STUDY ON PROFIT PLANNING AND CONTROL OF MANUFACTURING ORGANIZATION

## (A Case Study of NEBICO Private Limited)

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# CHAPTER- I
# INTRODUCTION

## 1.1 Background of the Study

Nepal is a landlocked sovereign country. It is situated in South Asia. The total area of the Nepal is 147181 sq. km., which is 0.03% of the total world and 0.3% of Asia. Nepal is located between $26^0$, 22' to $30^0$, 27' north. The average length of Nepal is 885 km. east to west and average breadth is about 193 km. north to south. It also lies between two big countries, i.e. China in the north and India in the east, west and south. Nepal is 22 times small than India and 65 times than China. Nepal is divided into five regions which are Eastern region, Central region, Western region, Mid Western region and Far Western region. But according to geographically, it is divided into three regions which are a) The Himalayan region b) The Hilly region and c) The Terai region

Nepal is the least developed country. The economic condition of the nation is not good. All manufacturing companies are measured profit planning and control system. But most of them are not operating well. They are suffering from various problems directly or indirectly. Through this study researcher intend to analyze the profit planning and control system through budgeting system of NEBICO Pvt. Ltd. Profit planning and control system is the process of examining the relationship among revenues, costs, and profit for a relevant range of activity and for a particular time frame. It is important to remember the cost behavior. How do costs changes in response to the change in the volume of activity? The answer is all costs do not behave in the same way toward the changing volume.

In most of manufacturing enterprises of Nepal, Profit planning process has not been applied in practice. Consequently most organizations suffer from poor performance. This research study is concerned with the profit planning in manufacturing company specially of Nebico Pvt. Ltd. Profit planning process significantly contributes to improve the profitability as well as the overall financial performance of Nebico by the help of best utilization of resources. Budgeting is the key to produce financial planning. So all the organizations which, are based on commercial principles have to focus on the most important single tool of profit planning and control while managing their physical and financial targets.

Profit is the most important indicator for judging managerial efficiency. So every organization has to manage its profit because without profit it can not operate effectively. Various functional budgets are the basis tools for proper planning of profits and control over them. There are so many standard accounting tools and techniques are used to measure the performance of organization. Among them profit planning and control analysis is also one. CVP analysis is a part of profit planning and control. The analysis of relationship between cost, volume and profit is known as cost-volume-profit analysis. It helps to determine the minimum sales volume to avoid losses and the sales volume at which the profit goal of the firm will be achieved. It provides the following answers of the questions such as:

- What minimum level of the sales need to be achieved to avoid losses?
- What should be the sales level to earn a target profit?
- What will be the effect of changes in price, cost and volume on profit?
- Which profit is the most profitable and which one is the least profitable?
- How will profit be affected when sales mixed is changed

Cost volume profit analysis is a tool as profit planning and control measures the BEP of the organization, which is level of no profit no loss. So every organization has to use CVP analysis. It would be more beneficial to Nepalese enterprises which are suffering from loss but not applying CVP analysis.

### 1.1.1 Profile of the Nebico Private Limited

Nebico Private limited established in the year 1966 A.D. and started its operation in 1967 A.D. It is the oldest confectionary industry in Nepal. It is situated in Balaju Industrial State and has occupied over one bigha (Approx. 13 ropanies) of land. From the early beginning days of its manufacturing it has gained a special status among the Nepalese competitors as a qualitative confectionary company.

With the semi automatic machine the Nebico company is the first to manufacture biscuit and confectionary. At the time of its establishment its capacity was only two metric tone a day on eight hours a day basis. In the year 1968 A.D. the company changed its name from ‘National Biscuits and Confectionary Limited’ to ‘Nebico

Private Limited' and was registered accordingly. In 1978, Nebico increased its capacity from two metric tones to five metric tones per day. The pioneer biscuit manufacturer of India named Britannia industries limited joined hands in technical collaboration and production with the Nebico Company in 1980 A.D. Presently the production of biscuit is done on two shifts each of eight hours basis with a capacity of five metric ton per shift. The products are marketed through out the country and the marketing territories are divided into seven territories in the country. Such as:

i) Central
ii) Western
iii) Midwestern
iv) Far- western
v) Eastern
vi) Kathmandu
vii) Sub- Kathmandu Nepal

Nebico Private Limited has also adopted different strategies for different marketing territories accordingly. Market demand sales of the product to open the door of success. Nebico has been manufacturing different types of biscuits and confectionary. All the products have their own tastes, value as well as market demand. Mostly there are three types of taste available for biscuits: salty, sweet and premium sweet. Total number of person currently working in the organization is 292; among them 250 are male and 42 are female.

The authorized capital of Nebico Private Limited is Rs. 1000000 and paid-up capital is Rs. 6035000 divided into 2146 and 3859 shares of Rs. 100 each with private individual own the shares. The raw materials for the company are wheat, sugar, fats, milk, other chemicals, packing materials etc. Quality goods are the first preference for Nebico Private Limited, so it uses only quality raw material for its production. Nebico Private Limited is the first company in Nepal to get Nepal Standard Mark since its inspection in 1984 A.D. (Chaitra 2040 B.S.).

Nebico Private Limited organization chart indicates that board of director is the head of the company. Under the chairman, managing directors are in operation of the company. Four divisions are under the managing director (i.e. Production and

Planning, commercial, financial and administration and external liaison). Under this division, eight departments, eight sections are presently operating in the industry (See appendix-II).

## 1.2 Focus of the Study

In most of manufacturing organization of Nepal, Profit planning process has not been brought in practice. Consequently most organizations suffer from poor performance. This research study is concerned with the profit planning in manufacturing company specially of Nebico Pvt. Ltd. Profit planning process significantly contributes to improve the profitability as well as the overall financial performance of Nebico by the best utilization of resources. Budgeting is the key to successful financial planning. So all the organizations which are based on commercial principles have to focus on the most important single tool of production planning while managing their physical and financial targets.

Profit is the most important indicator for judging managerial efficiency and it does not just happen. So every organization has to manage its profit because without profit it can not operate effectively. Various functional budgets are the basic tools for proper planning of profit and control over it.

Cost volume profit analysis examines the responses of profit to changes in volume. It is useful for single product as well as multiple product firms. This analysis will be designed to include the firm's variable costs of order getting and order-filling. It predicts the effects of changes in costs and sales level on the income of the business.

"In its simplest form, it involves the determination of the sales level at which a company neither earns a profit nor incurs a loss, or in other words, the point at which it breaks even. For this reason, CVP analysis is one of tools of profit planning and control system. However the technique can be expanded to answer additional questions, such as; what sales volume is necessary to earn a desired net income? what net income will be earned if unit selling prices are reduced in order to increase sales volume? What is the existing budgeting system? What is the functional budget and their performance? What is the correlation between sales, production and profit? When the technique is expanded to answer such additional questions, the descriptive phrase profit planning and control system is more appropriate than break-even analysis" (William and Kermit, 1984:336).

Hence, a company may use CVP analysis as a profit planning and control system tool when the sales volume is known and management need to find out how much profit will result. Another way of planning is to begin with a target profit. Then, through profit planning and control system a company can decide the level of sales needed to reach that profit. Similarly, for the cost control purpose, profit planning and control system is a way to measure how well different departments in the company are doing. At the end of a period, the company analyzes sales volume and related actual costs to find actual profit. It measures performance by comparing actual costs with expected costs. These expected costs are computed by applying profit planning and control system to the actual sales volume. The result is a performance report on which management can base the control of operations.

So, a dynamic management, therefore, uses profit planning and control system to predict and evaluate the implications of its short-run decisions about fixed costs, variable costs, volume and selling price for its profit plans on a continuous basis.

So, this study will be focused on details study about cost volume profit analysis of Nebico Private Limited. It also focuses on the weakness of the enterprise’s management and to comment on their techniques.

## 1.3 Statement of Problems

The prime concern of every nation of the world is economic development. Under developed countries are facing several problems in the process of economic development. Nepal is not exception to this condition. The majority of people have not been able to get even basic facilities. Government has established several public enterprises for the sake of providing necessary facilities. Most of manufacturing organization is found to be operating unsatisfactory the financial loss and managerial responsibilities for these ailing units have to be borne by the government. This situation has been the major obstacle for countries economic growth. Nebico, one of the old industries is also having same type of problem.

The following are the major problems based questions which will be the major focus of the study:

a) What are the major problem facing by enterprise during the application of profit planning and control?,
b) What are the effects on profitability of Nebico, from its existing budgeting system?
c) Are the cost bear by Nebico are realistic the relationship between sales, production and profit?
d) Is earning of Nebico profit is satisfactory or not?

## 1.4 Objectives of the Study

Normally, the objectives mean the further plan of performing task. The general objectives of this study is to evaluate the profit planning and control system of manufacturing company like NEBICO Pvt. Ltd. The other major specific goals of this study are as follows.

- To evaluate the existing budgeting system of Nebico Pvt. Ltd.
- To analyze the functional budget and their performance.
- To find out the correlation between sales, production and profit
- To determine the CVP sales of Nebico with sensitivity of CVP.
- To suggest and recommend with the help of major findings.

## 1.5 Significant of the Study

Regarding the present situation of Nepalese economy none of the Nepalese people can feel proud by heart. The economic recession involving in various causes as influenced the present condition of Nepal. Profit planning and control system requires a separation between sales and production costs, semi-variable or mixed cost can be segregated into variable and fixed components by applying any of the cost segregation methods, as visual fit method, high low method or least square method.

The analysis of relationship between sales, production and profit is known as profit planning and control system. Profit planning and control system helps to determine the minimum sales and production to avoid losses and the sales at which the profit goal of the organization will be achieved. It helps management in seeking the most profitable combination of sales and production. It also helps short run decision about sales, production and profit plan on a continuous basis.

So, every organization has to pay attention towards their cost volume profit analysis system. This study of profit planning and control system of Nebico helps to know BEP level, sales revenue to achieve target profit, safety margin and other information and to take correct action to control unusual costs for enterprise. So, formulation and implementation of the plan of enterprises can success. Hence the policy makers and researcher in the area of manufacturing area would be benefited from this study.

## 1.6 Limitations of the Study

As every research has its own limitation, so this study has also limitations which are as follows:

(i) This study is connected to the area of profit planning and control system of Nebico,

(ii) The analysis of data is based on five years from 2060/061 to 2064/065,

(iii) The time is limited and the thesis will fulfill the partial requirement of MBS,

(iv) Majors portion of analysis and interpretation is done on the basis of available secondary data and information, which are provided by Nebico,

(v) This study is carried out by for academic reason, the outcomes may differ if carried out for reasons by other scholars or experts,

(vi) The comprehensibility and the accuracy of the study is based on the data available from the management of Nebico, and various published document etc.

## 1.7 Organization of the Study

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

**Chapter I:** This chapter has included background of the study, focus of the study, statement of problem, objectives of study, significance of the study, limitations of the study and organization of chapters.

**Chapter II:** This chapter has included conceptual framework, approaches to profit planning and control, extension of C-V-P analysis, budgeting, review of books journals and articles and review of previous research and reports with research gap etc.

**Chapter III:** This chapter has included research design, population and sample, source of data, variable studies and tools of data analysis.

**Chapter IV:** This chapter has included analysis of sales, fixed costs, variable costs and semi-variable costs. In addition, computation of BEP, CM analysis, MOS and P/V analysis are also computed for analysis and interpretation to fulfill objectives of the research. Major finding are also pointed out.

**Chapter V:** This last part provides summary, conclusion and recommendations. An extensive bibliography and appendices are also included at the end.

# CHAPTER- II

# REVIEW OF LITERATURE

## 2.1 Conceptual Framework

Giving a clear picture of profit planning and control in the most possible smooth and systematic way is the main purpose of this chapter. Clarifying and defining the concept of profit and planning will lead to a more meaningful concept of profit plan.

A business firm is an organization designed to make profit and profit is the primary indicator of its success. 'Profit does not just happen, profit is to be managed. Profit is the main test of the business enterprise's performance. Simply, stating profit is the excess of income over cost, of production: But the term 'profit' is very controversial and there are several different interpretations about this, "An economist will say that profit is the reward of entrepreneurship for risk taking. A labour leader might say that it is a measure of how efficiently labour has produced at-id that it provides a base for negotiating a wage increase. An investor will view it as a base of the return on his or her money. An internal revenue agent might regard it as a base for determining income taxes. The accountant will define it simply as the excess of firms revenue over expenditure of producing revenue in given fiscal period" (Lynch and Richard, 1984:25).

Using the accountant's measuring stick, management think of profit as

- A tangible expression of the goals it has set for the firms.
- A measure of the performance towards the achievement of its goals.
- A means of maintaining the health, growth and continuity of the company.

In the absence of profit nobody can think about the long term survivability of the organization and all set of objectives for what the organization was established may turn into bundle of magic sticks only covered with dream and imagination. Profit around which all organizational activities directly or indirectly revolve, play the significant role for judging the management efficiently revolve, play the significant role for judging the management efficiently. It is the primary objective of business.

Hence, it can be concluded that profit is the excess of revenue over the expenditure to measure how efficiently any business organization is operating. The amount of profit earned is one of the most important key factors.

### 2.1.1 Planning

After having some fundamental concept about profit it is necessary to know some concept about planning also. Planning- means deciding in advance what is to be done in future. It is method of thinking out acts and purpose before hand. It starts from forecasting and determination of future events. It is the first essence of management and all other functions are performed within the framework of planning. It is a determination of course of actions to achieve desired results.

All planning involves anticipation of future course of action and therefore bears on elements of uncertainty in respect of its success (Pandey, 1983:554).

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Planning is a rational way, a systematic way of receiving how business industrial or any organization will get where it should o b examine future alternative course of action open to any organization and choosing them. In choosing most flexible arid desirable course of actions, a perspective frame of references is established for current decision. In this process, planning examines the involving chains of cause and effect likely to result to the future and respectively exploit or combat them as the case may be.

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

I. Establishing enterprise objectives.
II. Developing premises about the environment in which they are to be accomplished.
III. Selecting a course of action for accomplishing the objectives.
IV. Initiating activities necessary to translate plans into action.
V. Current re-planning to correct current deficiencies

Planning is generally recognized as the most difficult task facing by the manager and it is one on which it is very easy to pre-estimate. “It clearly indicates that planning is decision making process of the higher order. It requires management time and dedication and a systematic approach. The decisions made in the planning process are: (a) anticipating since they are made some times in advance of action, and (b) interdependent choice by the management” (Glenn, 1986:11).

### 2.1.2 Levels of Planning

The level of planning can be divided into three categories. They are as follows

**A. Strategic/Long Range Planning**

Strategic/Long range planning is generally planned for two years or more, varying with the enterprises and sometimes extended to 10 years. Basically long range planning is more important for board and long living enterprises. “It is the continuous process of making present entrepreneurial (risk taking) decision style systematically and with the best possible organizing systematically, the effort needed to cam’ out these decision and measuring the results of these decisions against the expectations through organized systematic feedback. It is more than organization and analysis of information. It is a decision making process (Drucker, 1959:12-13).

Some of the decision that are made in preparing long term planning are

- Determination of goals, objectives and strategies.
- The level and direction of capital expenditure.
- The acquisition of new sources of funds.
- Organization design and structure.

The objectives of long range planning are given by George R. Terry are as under.

1. To provide a clear picture of whether the enterprise is handed.
2. To keep enterprise strong.
3. To focus on long term opportunities.
4. To evaluate management personnel.
5. To expedite new financing.
6. To bring attention to new techniques (Terry, 1986:235).

To achieve the purpose of long term planning, a coordinated effort on several fronts is required. Forecasts must be made of demand for products, service, general economic conditions and technological and competitive conditions.

**B. Mid-term Planning**

Medium term planning is normally prepared for two to three years time horizon. This planning is detailed more than long range planning and less then short range panning.

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### C. Short Term Planning

"The short term plan is synonymous with the classical budgetary period of one year. The short range planning is made after freeze is taken as the consideration of possible alternative course of action. Such course are outlined for the medium range plan which doesn't concern, implementation, its aim is weeding out a plethora of possibility which are for the most part long on promises and short on feasible, tangible results" (Corafas, 1992:52).

Short range planning is a limited time dimension. Usually it cover one year time period. It is used by the management as a substantial bf long range and short range plan.

## 2.1.3 Management Planning

Management planning is a continuous process as opposed to periodic endeavor. Since a planned projection can never be considered as the final product. It must be revised as condition change and new information becomes available. The function should very in scope and industry with the level of management. Top management has broader planning responsibility than lower management, yet each level of management should have definite planning responsibilities. Planning is the first function of management passage of time demands both replanting and new plans to correct performance deficiencies and to cope with unanticipated events that are unfavorable and to take advantage of new developments.

Management planning is processes that include the following five phases:

i. Establishing enterprise objectives and goals.
ii. Developing premises about the environment of entity.
iii. Making decisions about course of action.
iv. Initiating action to activate the plan and
v. Evaluating performance feedback for planning (Welsch and Hilton, 1998:5).

### 2.1.4 Forecasting and Planning

Forecasting is a prediction of a future event. Condition or situation whereas planning includes a program of intended future actions and desired result. But these two terms forecasting and planning are interconnected with each other. Forecasting is the prerequisite for planning Forecast are statements of expected future conditions. There expectations depend upon the assumption made. If assumptions are plausible, the forecast has better chance of being useful. Forecasting assumptions and techniques very with the kind of planning needed. “When estimates of future conditions are made on the systematic basis, the process is referred to us forecasting and the figure or statement obtained is known as forecast” (Gupta, 1993:2).

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## 2.2 Profit Planning

After having some knowledge about profit and planning it is going to present some theoretical concept of Profit plan. When the management plans for Profit for a certain period of time it is called Profit plan. To manage Profit, there should be the development of comprehensive Profit planning and control program. Profit planning is a comprehensive plan expressed in terms by which an operating program is effective for a given period of time. It includes the estimate of (a) the service activities and project comprising the program (b) the resultant usable for their support (Garth, 1992:55).

“Planning of profit” is estimation and predetermination of revenues and expenses that estimates how much outcome will be generated and how it would be spent in order to meet investment and product requirement. In the case of Institutional operations, it presents a plan for spending income in a manner that does not result in loss (Jack and Raymond, 1984:133).

“The term comprehensive planning of Profit is defined as a systematic and formalized approach for performing significant phase of the management planning and control function. Specifically it involves (1) The development and application of broad and long range objectives for the enterprise (2) The specification of enterprise goals (3) A long range Profit plan developed in broad term (4) A short range Profit plan detailed by assigned responsibilities (divisions, products, projects) (5) A system of periodic performance reports detailed by assigned responsibilities and (5) follow up procedures” (Glenn, 1986:1).

Planning of product is used for the development and acceptance of objectives and goals and moving an organization efficiently to achieve the objectives and goal. The broad concept of Profit planning entails an integration of numerous managerial approach and techniques, such as sales forecasting sales quota system, capital budgeting, cash flow analysis, cost-volume analysis, variable budget, time and motion study, standard cost accounting strategic planning, managerial planning and cost control.

Without proper planning Profit will not just happen, so even enterprises should systematically plan for Profit in a proper way various functional budgets are the basic tools for proper planning of Profit and control over them. Profit planning in fact is a managerial techniques and a Profit plan is such written plan, in which all aspects of business operations with respects to a definite future period are include. It is a formal statement of policy, plan objective and goal established by the top management in respect of some future period. It is a predetermined detailed plan of action developed and distributed as an audit to current operations and as a partial basis for the subsequent evaluation of performance. Thus, we can say that Profit planning is a tool which may be used by the management in planning the future course of action and in controlling the actual performance (Gupta, 1992:521).

Profit planning is a part of an overall planning process and is an area in which the finance function plays a major role. Profit planning is now an important responsibility of the finance manager while activities of this son require an accounting background. They also rest heavily upon the knowledge of business principles, economics, statistics and mathematics.

Planning of profit is one of the most important approaches that has been developed to facilitate objectives performance of the management process. The three most relevant aspects of the planning of Profit:

i. Planning of Profit requires major planning decisions by management.
ii. Profit planning entails pervasive management activities and
iii. Profit planning recognizes many of critical behavioural implication through the organization (Welsch, 1998:31).

In summary, planning of Profit has ultimate objectives of attaining the optimum Profit. It is the development of objectives and goals, assignment of responsibilities to fulfill the objectives, implementation of plans and the follow up procedures for correction and adjustment in planning.

### 2.2.1 A Fundamental Distinction of Planning of Profit

The concept of budgeting was originally established with the function of an accountant. At its origin the function of budgeting was assigned to the accountant. But in modern day budgeting is given much more importance and is regarded as a way of management and in more important sense is regarded as a basic technique of decision making and is given the name Profit planning and control program.

A well established and a well understood profit planning and control concepts lead an organization to ultimate success. But a failure to grasp this concept leads to a chaos for a business. So just to understand this concept better, consideration should be given to following points.

**1. The Mechanism of Profit Planning and Control**

Activities involve in the mechanism of profit planning and control is designed of budget schedules, routine and repetitive computations are clerical activities of the program of profit planning.

**2. The Techniques of Profit Planning**

Techniques are special approaches and method of develop information for managerial use in decision making process. These approaches like forecasting sales volume, a frequent application operation research, (approaches in resolving the rules - production - inventory problems) break even analysis, resources determinants (such as discounted cash for approach) cash flow analysis and variable budget procedures which can be developed and used for managerial decision making process are known as techniques.

**3. The Fundamentals of Profit Planning**

The fundamental are concerned with effective application of the theory at management process. It is applied for desirable management orientation these fundamentals need to be established as a foundation of managerial commitment.

Following are the some of the important fundamentals of profit planning

**(a) Managerial Involvement and Commitment**

Planning of profit program involves managerial support and confidence, participation and performance orientation. In order to engage completely in comprehensive profit planning, all levels of management must consider the following points.

- Understand the nature and characteristics of Profit planning.
- Be convinced that this particular approach to managing is preferable for their situation.
- Be willing de devote the effort require to make it operative.
- Support the program in all its ramifications and
- View the results of the planning process as performance commitment.

Top management has a much broader planning responsibility than lower management and yet each level of management should have definite planning responsibilities.

**(b) Organizational Adaptation**

A planning of profit program must rest upon sound organizational structure for the enterprise and a clear cut designation of lines of authorities and assignment of authorities is to establish a framework within which enterprise objectives may be attained in a coordinated and effective way on a continuous basis. The manager of each sub unit should be assigned specific authority and responsibility for the operational activities of that subunit

**(c) Responsibility Accounting**

Historical data including financial performance are used in planning of Profit includes the measurement of performance by using actual results. Actual results are compared with objectives, goals and standards to determine variance. Therefore, accounting system must be designed to provide financial information separable for each organizational unit that is by assigned authority and responsibility.

**(d) Full Communication**

Communication may be defines as the link that brings together the human elements in an enterprise. It can be broadly defined as an interchange thoughts and information to bring about a mutual understanding between two or more parties. It may be accomplished by a combination of words; symbols and message of understanding that come from working together, day out by two or more individuals.

**(e) Realistic Expectation**

Enterprise objectives and specific budget goal should represent realistic expectation. So management should avoid being either unduly conservative or irrationally optimistic. The objects and goal should be capable of attainment. Goal set as high as to be practically impossible of attainment discourage serious efforts to achieve them. To be realistic exception must be related.

i. To their specific time dimension and
ii. To an assumed external and internal environment that will prevail during that time span.

**(f) Time Dimension**

Effective implementation of the profit planning concept requires that the management of the enterprise establish a definite time dimension for certain types of decisions. In viewing time dimension perspectives in managerial planning a clear cut distinction should be made between historical consideration and futuristic consideration. Timing of planning activities implies a definite time schedule established for beginning and ending certain phases of planning process.

**(g) Flexible Application**

The profit planning approach anticipates exceptions, adjustments and re planning situation involve it is adopted to seize all favourable opportunities that were not covers by the previous budgets. The principle of flexibility is especially important to cost control. Expenses and cost budgets must not e used and interpreted rigidly. The budget must not constrain rational decision that should be made with respect to expenses merely because expenditure was not anticipated.

**(h) Behavioural View Point**

Only the motivated people working in the undertaking can make significant contribution for successful Profit planning program. For implementing the profit planning

**Limitation of Profit Planning**

Profit planning system are more common in larger companies, to serve management still the usefulness of Profit planning to very small business could have been circumvented by an early attempt to quality the dreams of head string but sloppy thinking entrepreneurs who never directly faced the uncertainties of their venture.

But, there are so many assumptions of using Profit planning programs. Firstly, the basic plans of a business must be measured in term of money, if there is to be any assurance that money will be available for the needs for the business. Secondly, it is possible to plan for the every aspect of the business with every other aspect to establish optimum Profit goals. Thirdly, Profit planning is preplanning not merely what to do it things workout as forecasted, but also what to do if things workout differently from the forecast.

Because effective budgeting requires coordinated planning, it is essential that all persons participating in the building of the budget are planning towards the same objectives and are contemplating the same company, industry and general economic condition this can be accomplished by issuing a statement of basic assumption prior to the start of the budgeting system. In developing and using a profit planning and control program the following four additional limitations should be kept in mind.

**1. The profit plan and Estimates**

The advantage and disadvantage of a profit planning program depend to a large extent on the realism with which the basic estimates are made. For example, estimates must be based on all available factors and sound managerial judgments. Estimating sales and expenses can not be and exact science, however, numerous effectively applied to these problems can produce realistic results when tempered with sound reasoning and judgment, if there is conviction that such estimates can be made realistically serious effort generally yields satisfactory results. Because the profit plan is based entirely on estimate and judgments, flexibility is essential in using and interpreting the results.

**2. Profit Planning and Changing Conditions and Environments**

A comprehensive budget program can not be started and perfected in short time. Profit planning and control techniques must continually be adopted, not only for each particular enterprise but for changing conditions within the enterprise. Various techniques must be tired. Improve, or discarded and replaced with other. In other word, a Profit planning and control program must be dynamic in every sense of the word. It will usually take more than one year to attain a realistic program and management must not expect too much during this period. Continuous budget education is necessary especially during the formative period.

**3. Perfect Execution of Profit Plan**

Profit plan will be effective only if all responsible executives exert continuous and aggressive efforts towards their accomplishment. Responsibility center managers must accept responsibility for attaining or exceeding department goal specified in the profit plans. All levels of management must understand the program, must be convinced of its relevance to their functions appropriate way

## 2.3 Profit Plan Development

Profit plans are developed with the help of functional budgets. But before going to this process we have to a general knowledge about budgeting.

A budget is a comprehensive and coordinated plan expressed in financial terms for the operation of an organization for some specific period in .the future. So a budget is the plan of the firm’s expectations in the future. “The word budget is used of many kinds of statements of future plans and expectation, varying enormously in their form and contents the use to which they are put, and even their very names (Edward and Hines, 1957:15).

A budget is generally understood to mean one of a series of similar statements prepared as a regular procedure and not as an isolated exercise. It is a statement of objectives as well as a forecast or an estimate. In budgeting the companies are predicting what will happen.

“A budget is a quantitative expression of a plan of action and an aid to coordination and implementation. Budget maybe formulated for the organization as a whole or for any sub unit. Budgeting includes sales production, distribution and financed aspects of an organization. Budget programs are designed to carry out a variety of functions planning, evaluating, performance, coordinating activities, implementing plans communicating motivating and authorizing actions” (Charles, 1992:123).

The preparation of comprehensive budget begins with planning of sales this planning will establish the basis for the detail planning production. Following the production schedule material usage and purchase budget, direct labour budget, expenses budget are derived in an appropriate sequence.

The major functional budgets developed in profit plan are as follows.

### 2.3.1 Sales Budget Plan

Sales plan is the starting point in the preparation of comprehensive profit planning and control. All the other plans and budgets are dependent upon the sales budget. The budget is usually presented both in units and-dollars 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 (Holmes, 1970:627).

“The sales planning process is a necessary part of production planning because (a) it provides for the basic management decision about marketing, and (b) based on those decisions, it is an organized approach for developing a comprehensive sales plan. If the sales plan is not realistic, most of the other parts of the overall plan is not realistic” (Welsch, 1998:16).

The primary source of cash is sales revenue, so depending up on the sales volume all other operational activities such as capital additions, the manpower requirement, the production level etc. setting.

The sales budget is a forecast of total sales prices and values in respect of each production of a future budget period.” After the planning premises have been received, development of the sales plan is next step in preparing the profit plans. The sales plan has three district parts (Ratham, 1994:12).

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

“The sales budget is the sales master plan for the future period. The sales budget itself is an estimate of three main figures: (a) The income that will be earned from sales, (b) The costs and expenses of making these sales and (c) the sales surplus. The income from sales will depend on the quantity and the price of the goods which will be sold”(Halsall, 1974:57-58).

The primary purposes of sales plan are as flows:

1. To reduce uncertainty about future revenues.
2. To incorporate management judgments.’ and decisions in to the planning process.
3. To provide necessary information for developing other elements of a. comprehensive profit plan and
4. To facilitate management control of sales activities (Welsch, 1998:172).

### 2.3.1.1 Sales Planning and Forecasting

We should not be confused on sales planning and forecasting which are synonymous. They are not the same. But they are related with each other. A forecasting is not a plan; rather it is a statement and quantified assessment of future conditions about sales revenue based on one or more explicit assumptions. A forecast should always state the assumptions up on which it is based. A forecast should always state the assumption up or which it is based. A forecast should be sales plan the management of company may accept, modify or reject the forecast. Whether a sales plan incorporates management decisions that are based on the forecast, other inputs and management judgments about such related items as sales volume, price, sales efforts, production and financing. A sales forecast is converted to a sales plan when management has brought to bear management judgement, planned strategies, and commitment to aggressive actions to attain the sales goods (Welsch, 1998:171).

“The term sales forecast is sometimes distinguished from sales budget as follows. The forecast is estimate, the prediction that may or may not become the sales budget. The forecast becomes the budget only if management accepts- it as an objective. Often the forecast leads to adjustments of managerial plans, so that the final sales budget differs farm the original sales forecast” (Charles, 1992:15).

A sales forecast is converted into a sales plan when management has brought to bear management judgment, planned strategies, commitments of resources and a managerial commitment to aggressive actions to attain the sales goals. In contrast, sales forecasting is a technical staff function. “A sales forecast has been translated into a sales budget and numbers of factors have to be taken into consideration (Charles, 1992:66).

“The short term sales forecast provides the basis for the current year sales plan and finished good inventory plan. At the same time the influence the long-term sales forecast is reflected to the capital expenditure plan and in finished goods inventory plan. The long term sales forecast serves at what might be called another end of the finished good inventory plan (Thomas, 1992:502).

Typically, sales forecasting are prepared at the staff level by technically trained individuals, employing numerous sophisticated analyses (such as trend fitting correlation analysis, mathematical models, exponential smoothing, and operation research techniques) where as sales planning is the function of top management.

### 2.3.2 Strategic and Tactical Sales Plan

A sales planning can be developed of two types of plans in accordance with period. Those are long range planning or strategic sales planning (for 5 to 10 years) and short range plan or tactical sales planning (for one year or less then one year). The sales-planning prepared for more than one year is strategic sales pluming and the time is not fixed for long range plan. Commonly 5 years to 10 years strategic plan. The planning prepared for one year or less than one year is short-range sales planning or tactical sales plan. The format is also known as strategic sales pluming. Usually strategic sales plan requires depth analysis of future market potentials. This is build tip form a basis foundation such as population changes, state of economy, industry projections and company objects. The effects of long term strategies are also brought to bear on the long-term sales plan. They would affect in such area as pricing, development of new product expansion of distribution channel, cost patterns.

Tactical sales plan is to be developed for short term period in a company for future 12 months detailed by months and quarters. It includes detailed plan for each major products and for grouping of minor products. Short term sales plan (Tactical sales plan) are usually developed in term of physical units or jobs and in sales or dollars.

For planning and controlling purposes short term profit plans must be developed by sales responsibility because short term profit plan provides major considerations for planning and controlling purpose. It is also necessary for completing other components of profit plan.

### 2.3.3 Comprehensive Sales Plan

To develop a comprehensive sales plan the following process should be followed.

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

Step 2. Prepare one or more sales forecast 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 above steps apply management evaluating and judgment to develop a comprehensive sales plan.

Step 5. Secure managerial commitment to attain the goal specified in the comprehensive sales plan (Welsch, 1998:17).

It emphasizes that these step must be revised and implements in various ways depending on the characteristics of the business and the expertise of the management.

### 2.3.4 Consideration of Alternatives

Developing a realistic sales plan involves consideration of numerous policies and related alternatives and a final choice by executive management among many possible course of action. Important consideration should be given on the problems which are as follows:

**(a) Price-cost consideration**

(a) Sales budget

(b) Plant capacity

(c) Opening inventory of finished good,

(d) Required closing inventory of finished goods and,

(e) Policy of the management.

Production is prepared for each product and manufacturing department and divided in to monthly budgets for planning the following factors is considered.

a) Economic batch- quantity
b) Delivery schedules
c) Seasonal condition
d) Optimum utilization of labour of plant capacity,
e) Optimum utilization of labour without much over time and ideal time.
f) Reduction of bottlenecks such as shortage of man, material etc.

g) Stock requirements and
h) Work in progress (Welsch, 1998:184).

There are three types of production policy which are given below.

**(a) Stable production policy vs. unstable inventory policy**

In this policy fixed units are to be produced equally in every month or specified period, while the final inventory of finished goods are to be unstable. Therefore the budgeted sale of that period is unequal. This policy utilizes the full capacity, it reduce labor turnover, and attracts better employee to the company. With this policy company can get regular supply of raw material. But with this policy there is problem of high storage, high capital requirement and high inventory risk.

**(b) Unstable Production Policy Vs. Stable inventory Policy**

Units of final inventory are to be stable at the end of each period and production units are to be fluctuated in each budget period. The number of units produced and budgeted sales are directly related. With this policy company can get advantages of simplified storages problem, low capital requirement, low inventory cost, proper preservation of inventory and lack of inventory risk. But we can mention these disadvantages in this policy which are low efficiency of employee, high labour turnover high training expenses, lack of regular supply of raw material and increase idle capacity.

**(c) Flexible in both inventory and production**

In this approach, flexible units are to be produced as well as flexible units of final inventory are to be maintained for specified budget period.

disputing of the curtail production throughout the year are function of the production department, so production executive should be responsible for planning and control of these function. These executives have initial knowledge about plant and personnel capacities, availability of materials and the production situation. Inventory levels, stability of production and capital additions, are the issue of top management policies. In case of multi-plant production, a balanced and co-ordinated production program requires and for its careful attention of top management is required. With respect to planning of production, the planners must determine an optimum balanced between sales inventory and production levels.

### 2.3.6 Material and purchases Plan Budget

Production is possible when there exists materials. In the absence of materials we should go through purchase. In this connection, comprehensive profit planning can not be dealt as a perfect subject except what material and purchase budget. After the sales and production has estimated, the next step is to prepare material purchase budget. When the production budget is completed then the requirement of raw material and components to be use in the process of manufacturing the finished products could be estimated. Based on the production budget, the quantities of each materials to be used is determined and this determination of material usage leads to the solution of the problem of when and how much to purchase of each material.

In developing material plan, adequate coordinate should planned and control among (1) production requirement of raw materials and component parts, (ii) raw materials and parts inventory level, (iii) purchase of raw materials

This is materials and purchase budget which usually requires the following four sub-budgets.

**1. Materials and parts budget**

It deals with quantities of direct material and parts required for planning production by time, product and responsibility centre.

**2. Material and part purchase Budget**

A business firm is an organization designed to make profit and profit is the primary indicator of its success. ‘Profit does not just happen, profit is to be managed. Profit is the main test of the business enterprise’s performance. Simply, stating profit is the excess of income over cost, of production: But the term ‘profit’ is very controversial and there are several different interpretations about this, “An economist will say that profit is the reward of entrepreneurship for risk taking. A labour leader might say that it is a measure of how efficiently labour has produced at-id that it provides a base for negotiating a wage increase. An investor will view it as a base of the return on his or her money. An internal revenue agent might regard it as a base for determining income taxes. The accountant will define it simply as the excess of firms revenue over expenditure of producing revenue in given fiscal period" (Lynch and Richard, 1984:25).**4. Cost of materials and parts used budget**

This budget specifies the planned cost of material and part that will be used in the productive process.

The materials purchase budget and its sub-budgets should be designed in such a way that the related activities and cost will be budgeted in terms of responsibility centers interim time periods, type of raw materials and parts and type of finished products.

**Formula for planned purchase of materials**

| | |
|---|---|
| Material required for production (units) | …………. |
| Add: Ending inventory of material required | ……………… |
| Total material required | **XXXXXXX** |
| Less: Beginning inventory of material | ………………. |
| Planned purchase of material | **XXXXXXX** |

The basic two questions should be answered in developing the policy with respect to purchase and inventory. The first is how much to purchase at a time is determined by Economic order quantity (EOQ).

Formulas for EOQ is:

$$EOQ = \sqrt{\frac{2A0}{C}}$$

Where, -

A =Annual requirements in unit

O = Average annual cost of placing an order

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

The second is when to purchase is determined by Reorder Level (ROL). At this level, the inventory is equal to the quantity needed to sustain production for a period equal to the time to reorder and receive the replenishments. Often safety stock is included in ROL.

### 2.3.7 Direct Labour Budget/plan

#### 2.3.7.1 Meaning

For the annual profit plan, direct labour budget should be developed by responsibility centre, interim periods and product wise. Direct labour is defined as those labour costs directly indentifiable with the production specific units of finished goods. The direct labour budget includes the planned direct labour requirements necessary to produce the types and quantities of output planned in the production budget. "Direct labour budget is largely dependent upon the production budget. Calculation of the total number of hours now takes place. Standard time is determined by time and motion studies, the hours are then converted into labour requirement of each department of cost centre. The labour hours multiplied by the rate of wage including allowances indicate the direct labour cost (Welsch, 1998:23).

Direct labour budget is estimation of planned direct labour hours and cost. When production Budget is competed and planned units of each product to be produced is budgeted then labour budget will be prepared by multiplying the estimated labour hours per units to be produces. The direct labour budget comprises the panned direct labour requirement necessary to produce the types and quantities of outputs planned in the production budget. The responsibility for preparing the direct labour budget should' be assigned to the executive in charge of manufacturing. The cost accounting and personnel departments also help for preparing-direct labour cost plan. After completed of this plan, it should be submitted to the budget manager for review and next submitted to the executive committee. When the direct laoour budget is tentatively approved it becomes the part of the profit plan (Welsch, 1998:281).

In some case, it is found that labour costs are greater than all other costs combine. In board concepts, labour costs include all expenditure for employee: top executive, middle management personnel, staff officers, supervisors and skilled and unskilled employee.

The production plan provides the underlying data for planning the direct labour requirements. The direct labour budget required two additional decisional inputs:

(a) The standard direct labours hours per unit of each finished goods and

(b) The e pay scale or rate per direct hour expected to be in effect during the coming budget period. Direct labour budget is the means to the management for planning manpower development program.

### 2.3.7.2 Approaches in Planning Direct Labour Costs

The approach used to develop the direct labour budget depends primarily on the

1. Methrmance reporting and evaluation of results.

### 2.3.7.3 Planning Direct Labour Hour and Wage Rate

Internal factors may indicate the most particle approach to use for planning direct labour hours. An important function of industrial engineering is develop standard labour times for various operations and products. In some producing department reliable labour time standards can be developed. It is impractical to estimate direct labour time accepts in terms of average based on experience. General there are four times for each product. These are time and motion study, standard cost directly estimate by supervisors and statistical estimate by a staff group. So planned direct labour hours planning production standard rate

If it is possible to relate planned production to direct labour hour and to plan wage rate realistically for each productive department, computation of planned direct labour costs involves multiplying planned labour hours by planned wage rates.

It is also important for service and retail companies to budget labour cost. Labour account for the every portion of expenditure in bank. Restaurants hotels and transportation companies.. Such companies do not generally use the classification of direct labour and labour costs are usually referred to as operating expenses.

### 2.3.8 Overhead Budget

The cost sector of manufac A business firm is an organization designed to make profit and profit is the primary indicator of its success. ‘Profit does not just happen, profit is to be managed. Profit is the main test of the business enterprise’s performance. Simply, stating profit is the excess of income over cost, of production: But the term ‘profit’ is very controversial and there are several different interpretations about this, “An economist will say that profit is the reward of entrepreneurship for risk taking. A labour leader might say that it is a measure of how efficiently labour has produced at-id that it provides a base for negotiating a wage increase. An investor will view it as a base of the return on his or her money. An internal revenue agent might regard it as a base for determining income taxes. The accountant will define it simply as the excess of firms revenue over expenditure of producing revenue in given fiscal period” (Lynch and Richard, 1984:25).turing enterprise is vitally influenced by factory overhead, distribution on administrative expenses. There are three broad categories of expenses and general administrative expenses and for this three separate sub-budgets are prepared.

“Expenses planning should not focus on decreasing expenses, but rather on better utilization of limited resources. Expenses planning and control should focus on the relationship between expenditures and the benefits derived from those expenditures: The desired benefits should be viewed as goals, and sufficient resource must be planned to support the operating activities essential for their accomplishment” (Welsch, 1998:302).

To support the objectives and planned programs, reasonable expenses should be maintained and the relationship between expenditures and the benefits derived form those expenditures should be focused analyzed. Some companies cut expenses without considering the effects on benefits. Although such decision temporarily reduce expenses,’ soon they cases ever higher cost because of break down inefficient machines. Frustrated employees shortened assets lives etc.

The expense of planning the knowledge of cost behaviour is important cost behaviour is the response of a different volume of output. There are three distinct categories of expenses when they are viewed in relation to change in output.

i) Fixed expenses :-constant in total, regardless of fluctuations in output.

ii) Variable expenses :-change in total directly with changes in output, constant per unit.

iii) Semi-variable expenses:- Neither fixed nor variable change in the same direction of output but not proportionately.

The expenses budget should be in total for each responsibility centers and by interim time periods. The expenses budget can be divided into three sub-budgets.

Three broad categories of expenses are included with in the overhead budget.

a) Manufacturing overhead (Factory overhead)

b) Selling and distribution expenses

c) Administrative expenses.

### 2.3.8.1 Manufacturing or Factory Overhead Budget

After preparation of production budget, then direct labour and direct materials budget be prepared and manufacturing overhead budget is also prepared on the basis of production budget. Planned cost of goods manufactured is consolidation from of direct materials budget direct labour bud and manufacturing overhead budget.

Manufacturing overhead is not directly identifiable with specific products or jobs. It is a part of total production cost. Manufacturing overheat consists of indirect material, indirect labour, all other miscellaneous factory expenses, such as taxes, insurance, depreciation, supplies, utilities, repairs etc.

"Manufacturing overhead is that part of total production cost not directly identifiable with specific products or jobs. Manufacturing overhead includes many dissimilar expenses therefore it causes problems in the allocation of these costs of products.

There are two distinct types of responsibility center (departments) in most manufacturing companies: producing and service. Responsibility for the operation of each department should be classified separation of in the chart of account used by the cost accounting department." "Manufacturing overhead is the total of indirect labour, indirect materials cost and indirect expenses of the factory" (Welsch, 1998:207).

While developing the manufacturing overhead budget the following step should be taken:

1. Translate the requirements specified in the production plan into output or activity in each department. By doing this we can compute the planned departmental output or activities.
2. Plan departmental overhead expenses.
3. Allocate the planned department expenses to the producing department.
4. Allocate the producing department expenses to the products.

Following this above step, per unit overhead rates for each product could be computed by adding tile direct materials cost and direct labour cost for each products. We are in position to compute the cost of goods manufactured.

#### 2.3.8.2 Selling and Distribution Expenses Budget

Selling and distribution expenses include all costs related to selling, distribution and delivery of products to customers. In many companies, this cost is significant percentage of total expenses. Carefully planning of such expenses affects the profit potential of the firm. "Fundamentally the top marketing executive has the direct responsibility for planning the optimum economic balance (for profit potential) between (a) the sales budget (b) the adverting budget and (c) the distribution expenses budget. Because of interrelationship between them, sales, advertising and distribution expenses should be viewed as one basic problem (Welsch, 1998:314).

Selling and distribution expenses are not product cost and are not allocated to specific product. A separate distribution expenses plan should be developed for each responsibility center in the distribution function- This includes expenses related to selling, distribution and delivery of products to customer.

Mainly there are two types of selling expenses:

1. Sales office expenses which cover the cost of salesman and their administrative support.
2. Sales direction and promotional expenses, which cover the cost of directing the sales effort and promotional charges such as advertising.

The distribution expenses budget should be planned by responsibility center and by interim time periods. In some case this might be by sales district, in other cases this by products.

#### 2.3.8.3 Administrative Expenses Budget

Administrative expenses include expenses other than manufacturing and distribution expenses. These expenses are incurred in the responsibility centers that provide supervision and service to all functions of the enterprise rather than in the performance of any function.

It is advisable to base budgets administrative expenses on specific plants and program. Post experience adjusted for anticipated change in management policy and general economic conditions helpful. Because most administrative expenses are fixed, an analysis of the historical record will often provide a sound basis for budgeting them.

### 2.3.9 Flexible Expenses Budget

Flexible budget is directly related to expenses and cost. The fundamental concepts of flexible budget for expenses are that all expenses are incurred because of (a) the passage of time, (b) output or activity. The concept focuses on the effect on expenses (and costs) of the passage of time and output or productive activity. The critical problem in developing budget formula for each responsibility center in a business is determination of the (a) Fixed component and (b) variable rate of each expense. To determine fixed and variable components in expenses required the following steps.

1. Precise definition of expenses.
2. Careful selection of an activity base for each responsibility center.
3. . Identification of the relevant range of output.

4. .Selection of appropriate methods to analyze expenses to separately identity the fixed and variable components of semi-variable expenses.

### 2.3.10 Capital Expenditure Budget

“Capital budgeting involves the generation of investment proposals: the estimate of cash flows for the proposal the evaluation of cash flow, the selection of projects based upon a acceptance criteria, and finally the continual evaluation of investment projects after their acceptance (Van Horne, 1976:66)”.

“Capital expenditures often called capital budgeting, which is the process of planning and controlling the strategic (long term) and tactical (short term) expenditures for expansion and contraction of investments in operating (fixed) assets. A capital expenditure is the uses of funds to obtain operational assets that will (a) help earn future revenues or (b) reduce future cost. Capital expenditure includes such fixed (operational) assets as property, plant, equipment, major renovations and patents Typically capital expenditure projects involves large amount of cash, other resources and debt that are tied up for relatively long period of time. Capital expenditures are investments because they require the commitment of resources today to receive higher economic benefit (profits) in the fixture. Capital expenditures becomes expenses in the future as their related goods and services are being used to earn higher future profits from future revenues or to achieve future lost savings.” (Ratham, 1994:394-395). “Capital budgeting is the making of long term planning decisions for investments and their financing” (Charles, 1992:452).

The investment decisions commonly known as capital budget Capital budgeting means planning for capital expenditures in acquisition in capital assets, such as a new building, new machinery or a new project as a whole. Thus capital budgeting involves following steps.

1. Consideration of investment proposals including alternatives
2. Application of profits, cash flows and analysis of cost benefits of two project.
3. Estimation of available funds and utilization of funds.
4. The objective is to maximize the profits with the₁utiiization of available

funds” (Ratham, 1994:154).

The budget of capital expenditure is included in- the short range profit plan presents that specific portion of the strategic long range capital additions plans that will materialize during the upcoming year, capital expenditure as for (a) major capital additions such as land, buildings, major improvement and maintenance and (b) minor or small capital expenditures that should initially be records as assets because they h A business firm is an organization designed to make profit and profit is the primary indicator of its success. ‘Profit does not just happen, profit is to be managed. Profit is the main test of the business enterprise’s performance. Simply, stating profit is the excess of income over cost, of production: But the term ‘profit’ is very controversial and there are several different interpretations about this, “An economist will say that profit is the reward of entrepreneurship for risk taking. A labour leader might say that it is a measure of how efficiently labour has produced at-id that it provides a base for negotiating a wage increase. An investor will view it as a base of the return on his or her money. An internal revenue agent might regard it as a base for determining income taxes. The accountant will define it simply as the excess of firms revenue over expenditure of producing revenue in given fiscal period” (Lynch and Richard, 1984:25).pital additions, projects and other needs.

Phase 2: Develop and redefine capital addition proposals.

Phase 3: Analyse and evaluate all capital additions, proposals and alternatives.

Phase 4: Make capital expenditure decisions to accept the best alternatives and the assignment of project designations to selected alternatives.

Phases 5: Develop the capital expenditure budget,

a) Strategic plan: re-plan and extend the long term plan by dropping the past year and adding one year into future.
b) Tactical plan: -develop a detailed annual capital expenditure budget, by responsibility the comprehensive profit plan.

Phase 6: Establish control capital expenditures during- the budget year by using periodic and special expenditure in periods after completion.

Phase 7.Conduct post completion audits and follow-up evaluations of the actual results from capital expenditures in periods after completion.

The primary problems in developing a capital expenditures budget are:

(a) The identification, analysis and evaluation of all relevant capital, expenditures alternatives and,

(b) Based on investment worth, selection of the best alternatives.

Capital expenditures involve two kinds of assets:- (a) Depreciable assets, (b) non-depreciable assets such as lands. Capital expenditure decision situation may be divided into 3 types (a) certainty (b) risk and (C) uncertainty.

The assets of capital budgeting analysis are comparing the benefits that occur over a period of time with amount invested. This comparison is made with a view to judging whether the benefits that occur over a period of time are at least high as the amount invested.

The selection of one alternatives or projects by the management is capital expenditure decisions. While doing such decision focus should be given mainly in two points. First investment decisions selecting the best alternatives based on their economic worth and second financing decisions-determining the amounts and sources of funds needed to pay for the selected alternatives. While making decision of capital investment, serious consideration should be given and proper evaluation should be made on proposals.

The widely used methods for measuring the economic value of a capital expenditure are:

1. Short cut method.

    (a) Pay back period

    (b) Accounting rate of return.

2. Discounted cash flow method

(a) Let present value

(b) Internal rate of return.

Short cut method

(a) Pay back period:- This method computes the pay back period which is the number of year it takes to recoup a cash investment from the annual net cash inflows from the investments. The formula is

Pay back periods in years (PBP) = Net cash Investment/Annual Net cash inflows

(b) Accounting rate of return:- This methods represents the ratio of the average annual profits to the-Investment in projects. The formula is

Accounting rate of return (A.R.R) = Average annual net cash inflow! Cash outflow of the investment

**Discounted cash flow method**

(a) Net present method:- This method compares the present value of the net cash inflow with the present value of the initial net cash cost of a capital expenditure project, tile amount different between these two present value amounts is called Net present value. The net cash inflows are discounted to present value by using a minimum rate of return. The formula to calculate Net present value (NPV) is **-**

$$\textbf{NPV=} \qquad {}^{At}\!\!\diagup (1 \quad \Gamma \quad K \quad )\ t$$

Where,

k = Cost of capital or forget rate of return.

t= No of years,

c = Initial cash outlays.

A = Expected cash inflows.

(b) Internal Rate of Return (IRR) The 1RR is time rate that will discount all the future net cash inflows so that their discounted sum will exactly equal the initial outflows of time investment project. The formula is:

$$A0= \frac{A_1}{(1+r)^1} + \frac{A_2}{(1+r)^2} \ldots\ldots\ldots \frac{A_n}{(1+r)^n}$$

Where,

r = IRR

Ao = initial investment at time zero.

After analyzing the above methods of measuring capital investment decision criteria can be summarized as follows:-

Method

| | |
|---|---|
| Accepted Project | Lower the PBP |
| PBP | Higher the ARR |
| NPV | Higher the NPV |
| IRR | Higher the IRR |
| ARR | (IRR>K) |

### 2.3.11 Cash Budget

The cash budget is a forecast of expected cash receipts and payments for a future period. A cash budget shows the planned cash inflow, outflows and ending position by interim time periods for a specific time period. In annual profit plan, short term cash plan is to be included. Basically cash budget includes two parts (a) the planned cash receipt (inflows) and (b) the planned cash disbursement (outflow).

Planning of cash inflow and outflow gives the planned beginning and ending cash position for the budget period. It will indicates (i) need for financing probable cash deficit (ii) need for investment planning to put excess cash to profitable use. Cash budget is related with other budget such as sales budget, expenses budget capital expenditure budget etc.

**Objective of cash Budget are to**

a. Give the probable cash position at the end of each period as a result of planned operation,
b. Identify cash excess or shortage by time periods.
c. Estimate the need for financing and or availabilities of idle cash for investment.
d. Co-ordinate cash with (a) total working capital (b) sales revenue (c) expenses (d) investments and (e) liability
e. Establish sound basis for continuous monitoring of the cash position.
f. Indicate the availability of cash discounts.
g. Preserve liquidity.

### 2.3.11.1 Approaches to Develop a Cash Budget

There are two approaches used to develop the cash budget

**1. Cash receipt and disbursement budget**

It is also called cash account or direct method. It is simple to develop. It is after used for short term cash planning as a part of the annual profit plan. This approach is based on detail analysis of the increase and decreases in the budget cash account such budgets as sales, expenses and capital expenditures.

**2. Financial accounting Approach**

It is some times referred to as the indirect income statement approach. Basically, planned net income is converted from accrual basis to a cash basis. Its starting point is planned net income. It requires less supporting details and provides less detail about the cash inflow and outflow. It is useful for making long range cash plan.

### 2.3.11.2 Techniques for improving cash flow

Planning cash flow of a company should include consideration of how to improve cash flows. Improving cash flows involves increasing the amount of available cash a day to day basis. To accomplish this objective, the management should focus on (a) the cash collection process to speed up cash collection. (b) The cash payment process to show down the payment of cash (c) the investment policies for investment of idle cash balance to obtain the objective of cash improvement of the company.

Some of the ways often used to improve cash collection process are follows.

1. Customers are encouraged for immediate payment of credit sales and account receivable.
2. Providing cash discount for early payments.
3. Reviewing credit grading process to determine whether bad credit risk are being scream out. All accounts receivable are received before due or not.
4. Considering the ways to decrease the time between the date the customers pay by cheque and the date that the cash is available for use in the bank account of company.

Normally, the following techniques are often used to minimize this time gap:

i. Using lock box system.
ii. Opening Bank accounts in related areas.
iii. Decreasing cheques processing time within the company and make daily night deposits of all cash and cheques received during the day.
iv. Promote timely and frequent billing an account receivable. Bill immediately after sale.

After distribution of the Profit plan, a series of Profit plan conference should be held. The top executives discuss comprehensively the plans, expectation and steps in the implementation. At this top level meeting, the importance of action, flexibility and continuous control will be emphasized. In essence each manager has to realize that the budget is a tool for his use. The manager of each responsibility center obtains an approved Profit plan for his center and it becomes the basis for current operation and exerts a considerable coordinating and controlling effects.

Performance must be measured and reported to management. Execution of the plan is assured through control. Timely performance evaluation generates greater importance for achieving goals so that corrective action can be taken immediately. But for increasing the probabilities of achieving the objectives, flexibility in budget application should be facilities as circumstances warrant.

## 2.6 Performance Report

Attainment of the planned profit is vital since management has to devote considerable time and effort to develop this. Evaluation of effectiveness and efficiency of plans operations and performances are essential fields of managerial activities. Control is the process of obtaining conformity of actual performance with planned course of action.

For internal management use of performance reporting is important part of comprehensive profit planning and control system. Performance report shows the extent to which the organization planned goals and objective are attained.

Performance reports usually prepared on monthly based and follow a standardize format from period. Such reports are designed to facilitate internal control by the management. It reports the actual results compared with goals and budget plan. The main objectives of performance report are communication of performance measurements, actual results and related variances.

As being one of the main tools for management control performance reports should possess certain characteristics. Welsch, Hilton and Gordon have suggested that the performance reports should be designed in such a way that it will fulfill the following criteria (Welsch, 1998:544-545).

1. Tailored to the organizational structure and focus of controllability (that is by responsibility centre)
2. Designed to implement the management by exception principle
3. Repetitive and related to short time periods.
4. Adapted to requirements of the primary users.

5. Simple understandable and report only essential information.
6. Accurate and designed to pin-point significant distinction.
7. Prepared and presented promptly.
8. Constructive in time.

Performance reports should be available on timely basis. The gap between the decision point and performance reporting should be minimized. Unfavorable situations and problems are critical to the manager at the time they occur. As time passes the manager becomes more concerned with new events and less concerned with past.

Manager should analyze these monthly reports carefully to be fully knowledge about high and low performance in their respective responsibility centers. Follow up procedures should begin at managerial level to discuss and analyze both satisfactory and unsatisfactory conditions. Decision should be made about the ways and means to correct unsatisfactory conditions. Favorable variances should also be analyzed (a) to determine whether the goal were realistic, (b) to commend those responsible for high performance and (c) to transfer some 'know now' to other responsibility centers.

## 2.7 Budget Variance

Variance is the deviation between budgeted or planned goals and actual results. As performance report shows such variance, the next step is to analyze such variance and to determine the underlying causes for managerial planning and control purposes variance analysis is the determination of the reasons for a reported variance whether favorable or unfavorable. The difference between standard cost and actual cost is variance.

There are numerous ways to study or investigate variance to determine the underlying causes. Some of the primary approaches are the following (Welsch, 1998:570).

1. Conference with responsibility center managers and supervisors and other employees in the particular responsibility center involves.
2. Analysis of the work situation including the flow of work Co ordination of activities, effectiveness of supervision and other prevailing instances.
3. Direct observation.

4. On the spot investigations by line managers.
5. Investigations 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 variance. One amount is treated as the base, standard or reference point. Variance analysis is frequently applied in the following situations.

1. Investigation of variance between actual result of the current period and the actual results of a prior period.
2. Investigation of variance actual results and standard cost
3. Investigation of variance between actual results and planned or budget goals reflected in the profit plans.

Generally, following steps involved in analyzing variance.

a. Setting standards.
b. Measurement of performance.

c. Analyzing variance.

d. Taking corrective action.

Variances are analyzed in the following areas.

a. Raw materials variance.

b. Overhead variance.

c. Sales variance.

d. Profit variances.

Variance should be broadly grouped under two categories favourable and unfavourable variances, future should be classified as controllable and then related center or managers should be accounted for responsibility.

### 2.8 Break Even Point

There is a close relationship between budgeting and cost-volume profit analysis (break even point). Although the analyze may be applied to historical data, its best application is to budget estimates. If flexible budget is not used and the variability of expenses is not known then careful analysis of cost-volume-profit relationship provides (a) expense data for annual profit plan and (b) expense data adjusted to actual output for the periodic performance reports. The break even point defined as that volume of levels at which revenue exactly equals total cost is some what incidental to the broader scope of cost volume profit analysis. This analysis is directly concerned with the effect on profits of changes in (a) fixed costs (b) variable cost, (c) sales quantities, (d) sales prices and (e) sales mix. It is a device used to determine the usefulness of the profit planning process of the firm. However, it should be noted that the formal profit planning and control involves the use of budgets and other fore casts and break-even analysis simply provide an review of the profit planning process and helps to evaluate the purpose and reasonableness of such budgets and fore cast. As a staring point in the profit planning, break-even-point helps to determine the minimum sales volume at which the profit goal of the firm will be achieved (Hampton, 1976:582).

A break-even-point occurs where total revenue from sales of goods or services is just sufficient to cover total costs. The formula used to calculate a break-even-points as follows.

$$\text{BEP}= \frac{Fixed\ \cos t}{Selling\ price\ perunit\ \text{Z}Variable\ \cos t\ Perunits}$$

Break even analysis is the study of the relationship between budgeted revenues and costs to determine how changes in each affect profits. The step in break-even analysis is to compare the break- even-point with projected operations. In the case of production below BEP, the responsible management should not proceed with the product under study unless fixed and variable costs can be reduced and or the selling price increase. It is in this way that break-even analysis facilitates pre-control and helps managers avoid situations where performance objectives will not be realized.

## 2.9 Review of Previous Studies

Review of literature is an essential part of all studies. It is way discover what other research in the area of our problem has uncovered. It is also a way to avoid investigating problems that have already been definitely answered. Review of literature provides the foundation for developing a comprehensive theoretical frame work from which hypothesis can be developed for testing. It also minimizes the risk of pursuing the dead ends in research. But there are very few research paper concerning comparative cost volume profit analysis has been conducted. Few dissertations have been submitted relating to cost volume profit analysis & the study is limited of various constraints. So this study is attempted to review the previous research work on profit planning & control as well as management accounting. As CVP analysis is one of the major tools of profit planning and control, the previous studies related to PPC are reviewed which will helpful to further study.

**Mr. Khagendra Prasad Ojha (1995),** has done a research on **"Profit Planning and Control in Manufacturing Public Enterprises in Nepal"**. For case study he has selected two public enterprises namely Royal Drugs limited (RDL) & Herbs production & processing company limited (HPPCL). His research was in partial fulfillment of MBA, submitted to the central Department of Management, Tribhuvan University. The study has covered a five years period from FY 2046/47 to 2050/51.

The objectives are:

a) To analyze the trend of Profit planning.
b) To compare between production and sales plan.
c) To examine the variation between production plan and actual production.

  a) Mr. Ojha has pointed out various finding based on the analysis of data and
  b) Inadequate authority and responsibility to planning department.
  c) Failure due to inadequate forecasting system.
  d) Cost volume profit (price-cost-volume) relationships are not considered when developing sales and pricing strategy.

e) Lack of entrepreneurship & commercial concept in overall operations of the enterprises.

f) In adequate planning of profit due to lack of skilled manpower.

g) Inadequate evaluation of internal and external variables.

**Mr. Gajendra Kumar Thakur (2001),** has conducted research work on topic of **"Cost Control Mechanism of Jankpur Cigarette Factory Limited"** for partial fulfillment of MBA, Submitted to the central department of management, Tribhuvan University. The study has covered five years of period from FY 2051/52 to 2055/56. The general objective of the study was to evaluate the cost control technique of JCF has for various finding by Thakur.

The objectives are:

a) To analyze the budget and cost control mechanism for the company.
b) To analyze the problems faced by company in terms of budget formulation.
c) To analyze the cost and profit trend of the company in the light of Budget.
d) To analyze the cost-volume-profit analysis for the company
e) To provide suggestions for improving the budgeting problems.

Major Findings:

- The cost volume profit analysis has indicated that contribution margin of JCF is not sufficient to meet all its fixed costs. The factory's break even sales during the study period always exceeded the actual sales volume. It is absorbed that the company has not sufficient margin of safety, which was loss figure. The high proportion of variable cost contribution margin was not able to met increasing fixed costs. In the JCF observing the data loss was occurring yearly but sale figure was fluctuating trend. It means decreased sales over total cost did not bring profit but invite losses.

- Overtime, idle time and absenteeism are found most responsible for labour cost increasing.

- JCF was funning in loss during study period due to high production cost, high selling distributing cost, excess labour cost and material cost. So JCF has to make proper plan to control unusual cost. It should b entrusted with responsibility of categorizing the costs on product wise basis.

**Mr. Sagar Sharma (2002),** has conducted a research work on **"Management Accounting Practices in Listed Companies of Nepal."** He has focused his study to examine and study to practice of management accounting tools in the listed companies of Nepal. Mr. Sharma's research study is based only on primary data. Stratified random sampling with proportionate allocation of percentage is followed to draw the sample.

The objectives are:

a) To identify the areas where management accounting tools can be applied to make strengthen the companies.
b) To identify the present practice of management accounting tools in Nepalese Manufacturing Enterprises.
c) To identify the problem faced by Nepalese Manufacturing Enterprises in applying management accounting tools.
d) To make recommendations to avoid difficulties in applying management accounting tools in Nepalese Manufacturing Enterprises.

Major Findings are:

- Management accounting is to help managers in overall managerial activities by providing information and helping in planning, controlling and decision making.
- Lack of information & extra cost burden are the main reason behind not practicing such tools.
- Different types of management accounting tools which are taught in the colleges are not found applying by the listed companies of Nepal.
- Nepalese listed companies are in infant stage in practicing of management accounting tool such as capital budgeting, annual budgeting, cash flow, ratio analysis, activity costing, cost volume profit relation etc.
- Regarding the tools practiced by the Nepalese manufacturing companies for measuring and controlling their overall performance. From the study it is cleared that 60% of the manufacturing companies measure their performance on the basis of profit or loss made by them during the year

while 26% of the companies practiced for measuring and controllingf the companies practice cost plus pricing, while 26 % of the companies practice going rate pricing and 7 % of the companies practiced target return pricing and break even pricing for their product. Therefore, from the study it is cleared that cost plus pricing technique is widely used by Nepalese manufacturing companies.

- Regarding the joint cost allocation tools practiced by the Nepalese manufacturing companies. From the study 47 % of the companies practiced joint cost allocation a unit or production basis. 40 % of the manufacturing firm had their own method for joint cost allocation. Such as ratio method, department wise and 13 % of the manufacturing companies practice sales value methods for allocating joint cost.
- A business firm is an organization designed to make profit and profit is the primary indicator of its success. ‘Profit does not just happen, profit is to be managed. Profit is the main test of the business enterprise’s performance. Simply, stating profit is the excess of income over cost, of production: But the term ‘profit’ is very controversial and there are several different interpretations about this, “An economist will say that profit is the reward of entrepreneurship for risk taking. A labour leader might say that it is a measure of how efficiently labour has produced at-id that it provides a base for negotiating a wage increase. An investor will view it as a base of the return on his or her money. An internal revenue agent might regard it as a base for determining income taxes. The accountant will define it simply as the excess of firms revenue over expenditure of producing revenue in given fiscal period” (Lynch and Richard, 1984:25).Regarding the practice of transfer price in the Nepalese manufacturing companies, it is cleared that 67 % of the manufacturing companies practiced cost base transfer pricing 26% of manufacturing companies practiced market based transfer pricing whereas 7% of the manufacturing companies practiced negotiated transfer price for their product.
- Regarding the decision-making and control process followed by Nepalese manufacturing firm, it is cleared that 73% of Nepalese manufacturing companies practiced control during the work period. 20% practiced control

before work has to be start technique, where as 7% practiced controls after finish the work. From the table, control during the work period is most practiced techniques for decision-making and control process.

- Regarding the cost and revenue estimation practice of Nepalese manufacturing firm, it was found that 80 % of the manufacturing companies practiced historical trend for cost and revenue estimation while 20 % manufacturing firm practiced market survey. Where as, no one companies practiced zero based budgeting and judgment analysis for their cost and revenue estimation purpose.
- Regarding the present problem faced by Nepalese manufacturing companies in decision-making process, it is cleared that 53 % Nepalese manufacturing companies face the problem of skilled manpower in decision-making process. 27% of manufacturing companies face the problem of undefined objective and 20% companies face infrastructure problem in decision-making process. While no one companies has lack of knowledge in decision-making process.

**Mr. Suraj Chandra Lamichhane (2003),** has conducted the research work on **"Budgeting as Tools of Profit Planning of Public Utility Enterprises: A Case Study of Nepal Telecommunication Corporation"** for master degree thesis submitted to Shanker Dev Campus, Tribhuvan University.

The objectives are:

a) To study the present application of cost-volume-profit analysis system of NTC.
b) To apprise and examine the practice and effectiveness of profit plan of NTC
c) To identify Break Even Point (BEP) of NTC.
d) To provide necessary suggestions and recommendations based on analysis for the company.

The major findings are:

- Achievement of sales is not satisfactory with are more variable than budgeted sales.

- Sales budgets prepared by NTC, according to the nature of its customers.
- NTC has prepared short range sales budget but long range budget is not prepared in detail due to luck of effective programmed.
- Actual production lines in NTC are more fluctuated than budgeted production line due to government influenced.
- There is a problem to analysis and control the cost due to overhead cost is not classified systematically.
- 
- NTC prepares various functional budgets to implement profit planning system to some extent.

**Mr. Durga Prasad Baral (2003),** has conducted research work on topic of **"Profit Planning and Control of Nepal Telecommunication Corporation"** for partial fulfillment of MBS, submitted to Shanker Dev Campus, T.U. the study has covered five years period of FY 2051/52 to 2055/56 and has pointed out various finding and recommendation.

The objectives are:

a) To analyze the trend of Profit planning.
b) To compare between production and sales plan.
c) To examine the variation between production plan and actual production.

Major Findings are:

- The management of NTC is not success to utilize of its assets properly and not able to sale telephone lines according to demand of customers.
- Customers' service and line maintained service are not satisfactory.
- Profit is earning but it is not satisfactory in monopoly situation of NTC.
- ISO sector is the main revenue sources but calling rate is decreasing day by day.
- Cash budget shows the huge amount of current assets.
- NTC is completely ignored in variance analysis.
- Analysis shows that fixed cost of corporations highly incurred.

- The corporation has not proper practice of segregating cost into fixed and variable.
- Overhead expenses are not classified systematically and it creates problem to analyze expenses properly.

**Mr. Mahendra Rai (2004),** has conducted research work on the topic of **"Profit Planning in Public Utilities sector of Nepal: A Case Study of Nepal Electricity Authority."** For partial fulfillment of MBS, submitted to Shanker Dev Campus, T.U. This study has covered five year period from FY 2054-55 to 2058/59.

The objectives are:

a) To analyze the trend of Profit planning for the company.
b) To compare between profit and sales plan.
c) To examine the variation between production plan and actual sales.

Major Findings are:

- There is no proper or systematic way to classify the cost. It consolidates all expenditure pertaining to manufacturing, administrative, salary selling and distribution under single roof as operation and maintenance expenditure budget.
- The operating cost is creating a drastic problem due to payment of the huge amount as interest on long term loan.
- NEA has not adequately considered controllable and non controllable variable affecting the organization.
- Break even analysis shows that the break even sales are lower than actual sales which are the signal of good operational situation.
- NEA ignores CVPA, while developing the sales plan and pricing strategy.
- There is a lack of proper co-ordination among various directorates and departments.

**Miss Kalpana Bhattarai (2004),** has conducted research on the topic **"Budgeting in Public Enterprises: A Case Study of Nepal Telecommunications Corporation"** in partial fulfillment for MBA, submitted Shanker Dev Campus, T.U. She has covered five years period from FY 2053/54 to

2057/58. Bhattarai has stated some objectives and finding.

The objectives are:

a) To analyze the Budget of company.
b) To analyze the problems faced by company in terms of budget formulation.
c) To analyze the cost and profit trend of the company in the light of Budget.
d) To provide suggestions for improving the budgeting problems.

Major Findings:

- NTC prepares both term and short term budget but the long term budget is confined only on the top level.
- The corporation is not able to maintain to proper coordination between various directorates is required on the goals and objective of the corporations.
- Because of lack of skilled planners and budgeting experts, budgets are prepared on adhoc basis. So there exists no consistency actual performance with budget.
- Because of high demand of telephone line there exist small gap between actual production and actual sales.
- All expenses are shown under only one budget name as "operating expenses budget."
- CVP analysis shows that BEP is satisfactory. But CVP are not considered while developing the sales plan and pricing strategy which is a vital for profitability.
- Increasing trend in cost is another issue of NTC which needs to be managed.
- Management is totally unknown to profit planning concept, corporate planning and participative management.

**Mr. Ghana Shyam Thapa (2004),** has conducted the research work on the **"Profit planning in Nepal Electricity Authority"** for the partial fulfillment of MBS submitted to Shanker Dev Campus, Tribhuvan University. The study has covered a five years of period from FY 2055/56 to 2059/60.

The objectives are:

a) To analyze the trend of Profit planning.
b) To compare between production and sales plan.
c) To examine the variation between production plan and actual production.

Major findings:

- NEA prepares both tactical and strategic profit plan but strategic plan is confined only to the top level executives.
- NEA sales revenue is in increasing trend during the study period.
- Operating costs have not been controlled effectively during the study period.
- NEA is not succeeding to achieve break even point in sales volume.
- NEA has not utilized its available capacity satisfactorily.
- NEA has not maintained sound liquidity during the study period.
- The net profit ration of NEA does not indicate the sound position of profit. NEA is bearing loss in next running years.
- NEA has not prepared plan and program for agriculture sector's consumption as well as not adopted the practice of preparing monthly budget which is necessary for planning & control.
- There is lack of proper co-ordination between various directorates in regard of the goals, objectives and strategies.
- NEA has not considered demand determinates such as family income, price of electricity, connection charges, cost of alternatives available, cost of auto generation of electricity and reliability of NEA service while forecasting demand.
- All the expenses, such as manufacturing administrative and selling and distribution arc not separated systematically. Authority has combined all expenses together and named it "Operation and maintenance expenditure budget" like wise, operation and maintenance expenditure is very high due to the higher amount of fixed cost and interest on long-term loan.

**Mr. Madhav Rijal (2005),** has conducted a research on **"Cost Volume Profit Analysis a Tools to Measure Effectiveness of Profit Planning and Control; A Case Study of NEBICO Private Limited."** He has centered his study to examine

CVP analysis as a tool in manufacturing industry and to analyze the CVP and its impact in profit planning. For the practical fulfillment of MBS submitted to shaker Dev Campus, Tribhuvan University, Rijal has analyzed the five years financial statement and has pointed out various objectives and findings:

The objectives are:

a) To analyze the cost –volume –profit for the company.
b) To compare between production and sales plan.
c) To examine the variation between production plan and actual production.

The major findings are:

- The company's variable cost is in proportion than fixed cost in total cost amount, which contribute for lower contribution Margin.
- The company has high fixed cost (i.e. salary and wages, technical & computer fees, deprecation interest, provident fund & subsidies)
- Company has no any plan to reduce cost. There is lack of effective cost control programs or techniques.
- The profit trend of the company is not satisfactory. As compared to profit, proportion is very low with fluctuated trend.
- The company has no detailed of any systematic expenses plan. The fixed cost, variable cost, mixed expenses plan are the necessary elements for profit planning & control.
- The company has no effective inventory policy. The inventory management, row material handling and controlling system are not efficient and effective.
- The board of directors is the main authority in price fixing and it directly interferes to price of biscuit and confectionary products.
- Nebico Pvt. Ltd. Has not proper practice of segregating the costs into fixed and variable or controllable and non controllable.
- There is no proper co-ordination among production, administration, distribution, inventory and sales department.
- Nebico has not utilized its capacity.

**Mr. Dipendra Raj Dhakal (2008),** has conducted research work on **"Cost Volume Profit Analysis as a Tools to Measure the Effectiveness of Profit Planning and Control: A Case Study of Gorkhakhali Rubber Industry Limited"** in the partial fulfillment for MBS, submitted to Shanker Dev Campus, T.U. Dhakal has covered five years period for FY 2059/60 to 2063/64 and listed some objectives and finding.

The objectives are:

a) To analyze the cost –volume –profit for the company.
b) To measure the effectiveness of profit planning and control tools.
c) To examine the variation between production plan and actual production.

Major Findings are:

- Sales plan of GRIL is not properly maintained. The industry uses the various methods for sales planning like market survey, distribution network etc. but up to date record are not maintained. So they have poor budgeting system.
- GRIL is not practicing the scientific and appropriate cost classification technique costs are classified into fixed and variable as per the decision of the management.
- Out of the total cost of GRIL, variable cost is almost 60% in every year which cause the low contribution margin.
- GRIL is in high interest bracket, out of the total fixed costs almost 60% is to be paid for interest. And the profitability of the company is greatly influenced by high fixed cost.
- This industry does not have any detailed and systematic practice of planning of cost which is one of the essential elements of profit planning and control.
- Lack of coordination between top and lower level of management.
- GRIL is facing problem fluctuating international price of rubber. Sometimes it also faces the problem of row material scarcity as well.
- Out of the two main product truck tyres, the truck tyres are more profitable than non truck tyres as shown by the product contribution margin.
- The financial position of the industry is not satisfactory. Gross profit margin

ratio and net profit margin ration are not satisfactory.

- transportation and insurance expenses, salary and wages, leakage and breakage, complementary expenses, traveling expenses, and water.

## 2.10 Research Gap

Many manufacturing private enterprises are not practicing various accounting tools and techniques to measure its performance in Nepal. Researcher should face problem for analyzing financial statement. Though there is significant gab between present researcher work and the previous research works. Most of the researches, profit planning tools are analyzed in one way or the other but impacts are rarely explained. Especially CVP analyses in manufacturing or private enterprises have been done very few by other researcher. For this purpose practice of profit planning and control system in Nebico is studied.

# CHAPTER -III
# RESEARCH METHODOLOGY

## 3.1 Introduction

In this chapter, efforts have been made to present and explain the specific research design for the sake of attaining the research objectives. The basic aim of the study is to analyze and interpretation of profit planning and control through cost, volume and profit analysis and budgeting system of Nebico Private Limited, where the study had needed to follow an appropriate research methodology to achieve objectives of the study. This chapter has focused on research design, nature and size of population and sample, sources of data, variable studies and tools for analysis. The basic objective of the study is to analyze the current practice of profit planning and its implementation in Nepalese manufacturing organization particularly of Nebico Pvt. Ltd. with respect to formulation and acceptance of goals, objectives, strategies and other operational planning and focus on the relationship between performance and management system to achieve the objectives. To accomplish the stated objective, this research has been under-taken to carryout research systematically and appropriate research methodology has been followed.

## 3.2 Research Design

"In order to make any types of research a well research design is necessary, which fulfills the objectives of the study. The research design is the strategy for conducting research. It describes the general framework for collecting, analyzing and evaluating data after identifying (i) what the researcher want to know, and (ii) what has to be dealt with in order to obtain required information" (Wolf and Pant, 1999:209).

The formidable problem that follows in the task of defining the research is the preparation of design of the research popularly known as research design. The present research is an explanatory research. Both descriptive and analytical research design is used. The present research uses both primary and secondary data.

## 3.3 Population and Sample

The natures of population were included private enterprises of Nepal. And size of population was included all players in private manufacturing sector. Due to various circumstances it could not be possible to attempt all the number of research population in this research. So, researcher has taken one private enterprises Nebico Private Limited among 11 Biscuits companies. The research had been defined nature and size of population and sample, which are presented in appendix-IV:

**Table No. 3.1: Population and Sample**

| S.N. | Manufacturing Biscuits Companies | Population/ Sample |
|---|---|---|
| 1 | 11 Companies | Population |
| 2 | Nebico Private Ltd. | Sample |

## 3.4 Sources of Data

There are vital role of data in research to clear and complete research objectives. Without the data, methodology can not be utilized to bring the conclusion. There be better to collect only proper and required data from needed sources.

For the purpose of profit planning and control of the Nebico Private Limited, there were collected mainly from both sources of data, which are as follow:

### 3.4.1 Primary Data

Primary data is original in nature. For the purpose of research work, primary data were collected. 25 questionnaires were distributed to the employees of Nebico Pvt. Ltd. And only 15 respondents responded questionnaires.

### 3.4.2 Secondary Data

It is the published data, which has been used by first person or other. Only primary data can’t fulfill the requirement of the research work. If it be possible, there need to face several problems. So, adoption of secondary data is also suitable to accomplish the objectives of study.

## 3.5 Data Gathering Procedure

The following procedures of collection of secondary data were adopted:

a) Library

b) Companies publications

c) Books and Journals/Magazines

d) Booklets, and

e) Internet and websites etc.

Basically, following techniques were adopted:

a) Observation

b) Direct meeting

c) Personal Interview through questionnaires etc.

The output of the research work depends upon accuracy of the applied data. So, the researcher had been tried to collect up to data and accurate data as far as possible. For primary data 25 Questionnaires were distributed only 15-response rate was obtained.

## 3.6 Variables Studies

A variable is a symbol to which numerals or values are assigned. In other words, a variable can take on values. The researcher had used two types of variables-independent and dependent variables. Variables studies are as follows:

**(i)** **Independent Variables:** It is the variables which can change other variables. In other words, a cause of it changes others.

**(ii)** **Dependent Variables:** It is the opposite of independent variables. It depends upon other variables. It changes causes of other variables.

The researcher has been defined the term profit planning and control in the first chapter. There are three factors (i.e. sales, Production and Profit) of profit planning and control system, which are interconnected and depend on one another. So, these three factors are dependent variables. But, testing relationship between these variable following criteria are assumed:

**Table No. 3.2: Classification of Variables**

| | Independent Variables | | Dependent Variables |
|---|---|---|---|
| a. | Production | a. | Profit |
| b. | Volume (Sales) | b. | Profit |
| c. | sales and production | c. | Profit |

## 3.7 Tools of Data Analysis

Collected data must be explained and analyzed to clear objectives of the study. Basically, following two techniques are used to explain the collected data.

### 3.7.1 Descriptive Techniques

These techniques were used to simplify the research report for better understanding as well as analysis and interpretation of collected data in theoretical form.

### 3.7.2 Quantitative Techniques

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

**CVP Analysis Tools**

CVP analysis was included the following extension computations:

(i) BEP in Units = $\dfrac{\text{Total fixed costs}}{\text{SPPU} - \text{VCPU}}$

(ii) BEP in Rs. = $\dfrac{\text{Total fixed costs}}{1 - \dfrac{\text{Variable Cost}}{\text{Sales Price}}}$

(iii) Contribution margin = Sales - Variable Cost or FC + Profit

(iv) Contribution margin ration = $1 - \dfrac{\text{Variable Cost}}{\text{Sales}}$

(v) BEP (% of Capacity) = $\dfrac{\text{BEP}}{\text{Total Capacity}}$

(vi) Cash BEP in Rs. = $\dfrac{\text{Fixed Costs} - \text{Non Cash outlays}}{1 - \dfrac{\text{Variable Cost}}{\text{Sales} - \text{Non cash items}}}$

(vii) Sales in Units for desire profit = $\frac{\text{FC } \Gamma \text{ Profit}}{\text{SPPU } Z \text{ VCPU}}$

(viii) Sales in amount for desire profit = $\frac{\text{FC } \Gamma \text{ Profit}}{\text{MC\%}}$

(ix) Sales in amount (to earn desired profit after tax) = $\frac{\text{FC } \Gamma \frac{\text{DPAT}}{1 \, Z \, \text{Tax rate}}}{\text{CM ratio}}$

(x) Margin of Safety = Planned or Actual Sales - BEP

(xi) Margin of Safety Ratio = $\frac{\text{Planned or Actual Sales } Z \text{ BEP}}{\text{Planned or Actual Sales}}$

### 3.7.3 Statistical Tools

The Statistical tools were included the following techniques to examine the relationship between the variables; and analysis:

(a) Mean, Standard Deviation and Coefficient of Variation (C.V.).
(b) Time Series Analysis (Trend Analysis).
(c) Correlation Analysis.

**(a) Mean, Standard Deviation and C.V.**

Mean $\left(\overline{X}\right) = \frac{X}{N}$

Standard Deviation (∃) = $\sqrt{\frac{U^2}{N} \, Z \, \left(\frac{U}{N}\right)^2}$

C.V. = $\frac{\exists}{\overline{X}} \mid 100$

**(b) Time Series Analysis (Trend Analysis)**

Trend analysis is also one of the most useful statistical tools. It is used for studying forecasting. A widely and most commonly used method to describe the trend is the method of least square.

The straight-line trend is given by the following formula:

Y = a + bx

Where,

Y =Values of dependent variables

a = y intercept

b= slope of the trend line

x = values of independent variable (Time)

$$a = \frac{\Sigma y}{n} \qquad b = \frac{\Sigma xy}{\Sigma x^2}$$

Where,

y = Sum of the observation in serious Y

xy = Sum of the observation in serious X & Y

$x^2$ = Sum of square of the observation in serious X

The straight line trend implies that irrespective of the seasonal and cyclical swings and irregular fluctuations, the trend value increase or decrease by a constant absolute amount 'b' per unit of time. Hence, the liner trend values from a series in arithmetic progression, the common difference being 'b' the slope of the trend line

**(c) Correlation Analysis**

Coefficient of Correlation (r) = $\dfrac{N.\Sigma UV - \Sigma U.\Sigma V}{\sqrt{N.\Sigma U^2 - (\Sigma U)^2}\sqrt{N.\Sigma V^2 - (\Sigma V)^2}}$

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

Where, X = distribution

N = No. of distribution

U = X – assumed Mean

V = Y – assumed Mean

# CHAPTER- IV

# PRESENTATION AND ANALYSIS OF DATA

## 4.1 Introduction

The presentation of data is the basic organization and classification of the study for analysis. After, data collection was completed; the data were classified for general purpose. The presentation and analysis of data assist to interpret and discussion in order to fulfill the objectives of the study using different tools and techniques.

This chapter has included analysis of sales, fixed costs, variable costs and semi-variable costs. The computation section includes computations of CVP analysis where it's extension tools are applied. The extension computations are BEP (in amount and units), BEP percentage of capacity or budgeted sales, contribution margin analysis, MOS, profit-volume analysis for future operation or profit planning.

Above all computations are done for analysis and interpretation of the company regarding objectives of the study, major findings and to provide valid recommendations. Profit planning is an action plan to guide the managers in achieving the objectives of a firm. A profit plan is a comprehensive and coordinated plan of an enterprise for same specific period in future. In overall planning of an organization profit planning is an area in which, the financial function plays a major role. Planning is carried out to fulfill the responsibility of forward thinking and future operation of the organization. Cost, volume and profit analysis is an analytical tool for studying the relationship among cost, profit and volume. Cost control and profit planning are possible with the help of cost, volume and profit analysis. It is also considered as a powerful tool in managerial decision-making in profit planning and control.

Primary data like segregation of fixed and variable cost, wages, salary cost analysis and regarding decision making is done here. The questionnaire distribution and discussion with different levels of authority persons were done to acquire data. Similarly, the secondary data is used for sales analysis, cost analysis, inventory analysis, profitability analysis, operation leverage analysis and cost, volume, profit analysis etc. Those available secondary data's were Balance sheet, Profit and Loss account, cost sheet, cash flow statement etc from the accounts department of Nebico Pvt. Ltd.

The available information and data where analyzed and interpreted in the following pages accordingly. The study covers the last five fiscal year from 2060/61 to 2064/65) of Nebico Pvt. Ltd.

## 4.2 Sales Plan of Nebico Private Limited

Sales plan provides basis management decisions for marketing strategic. On the basis these decisions and strategies the enterprise can develop a comprehensive sales plan. The sales plan is that ‘step which opens the door of financial plan. It is an estimation of sales for a period of time for future. The sales planning is already described under previous chapter sales Budget.

Realistic sales plan is needed for achieving the company's goal. Only with the help of properly planned budgets the sales target can be achieved. A sales plan is detailed schedule of expected sales for coming year; it can provide basic management decision about marketing. For making a considerable sales plan a proper research of market as well as past trend analysis, study of market opportunities, threats and responsibility etc are needed.

### 4.2.1 Sales Plan

The previous records of past sales trend need to be evaluated to figure out the future sales of the company. In Nebico's record there is no abnormal sale, which is beyond ten percent, increase or decrease in sales plan within five years. There is fluctuation in sales plan, which is depicted in figure 4.1. There is increasing trend of budgeted sales from FY 2060/061 to 2064/065.

There is fluctuation in percentage change in sales. In 2061/062, there was 2.08% change in sales and it reached to 5.71% in 2062/063. It increased to 1.23% in 2063/064 and reached to 2.78%. The reason behind fluctuation in sales volume was political instability and strike programme launched by political parties.  The figure also depicted that there is increased in sales volume in absolute figure.

**Table 4.1**

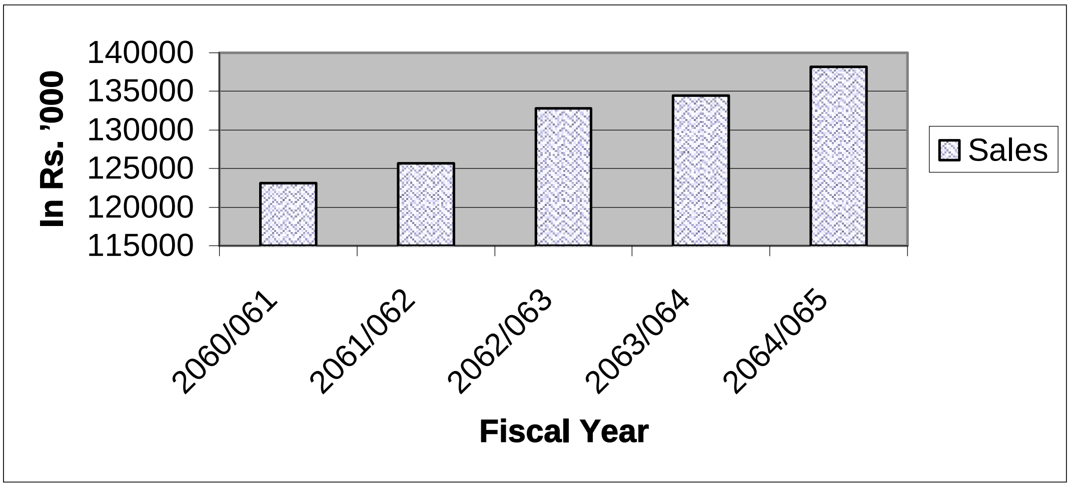
**Budgeted Sales Value**

| Year | Sales (in Rs '000) | Changes | Change in % |
|---|---|---|---|
| 2060//2061 | 123086 | - | - |
| 2061//2062 | 125647 | 2561 | 2.08 |
| 2062//2063 | 132824 | 7177 | 5.71 |
| 2063//2064 | 134461 | 1637 | 1.23 |
| 2064//2065* | 138200 | 3739 | 2.78 |

Source: Nebico Pvt. Limited, 2060-2065

Note: * Not audited

**Figure 4.1**
**Budgeted Sales Value**




### 4.2.2 Sales Value Analysis

Sales values are the total exchangeable market rate that can be obtained from the sold products. On annual basis, the total biscuits and confectioneries that are sold in the market, which receives money value, can be shown in the sales analysis of Nebico Pvt. Ltd. The following table shows the sales trend on yearly basis of Nebico in units and also in monetary sales value.

The sale varies for the fiscal year 2060/61 to 2064/065. It can be said that the difference is caused by various external factors like political instability, government policy, competition, market inflation etc as well as internal factors like lack of consideration of proper plan, product pricing, market research etc. Confectioneries contain very small portion of market share in comparison to biscuit market. Even though the market share of confectioneries are increasing unproportionately.

**Table 4.2**
**Actual Sales Trend**

| Details | 2060/2061 | % | 2061/2062 | % | 2062/2063 | % | 2063/2064 | % | 2064/2065 | % |
|---|---|---|---|---|---|---|---|---|---|---|
| Units(In metric tone) Biscuits | 1,685 | - | 1,609 | - | 1,700 | - | 1,645 | - | 1,380 | - |
| Confectionaries | 12 | | 10 | | 12 | | 5 | | 3 | |
| Amount (In Rs '000') Biscuits | 124,852 | 99.36 | 120,330 | 99.39 | 129,540 | 98.88 | 131,324 | 99.67 | 108,030 | 99.75 |
| Confectioneries | 804 | 0.64 | 737 | 0.61 | 1457 | 1.12 | 426 | 0.33 | 261 | 0.25 |
| Total amount | 125,656 | 100 | 121,067 | 100 | 130,997 | 100 | 131,750 | 100 | 108,291 | 100 |
| Increase/ Decrease in sales % | 16.63% | | (3.65%) | | 8.2% | | 0.57% | | (21.67%) | |

Source: Nebico Pvt. Limited, 2060-2065

In the fiscal year 2060/61, the total biscuits produced in metric ton was 1,685, where as confectioneries are only 12 metric ton. The market value achieved was Rs.124, 852,000 for biscuits and Rs. 804,000 for confectioneries was received. There is increased in sales value by 16.63% in comparison to the fiscal year 2060/061 with 2059/060. But Sales plan provides basis management decisions for marketing strategic. On the basis these decisions and strategies the enterprise can develop a comprehensive sales plan. The sales plan is that ‘step which opens the door of financial plan. It is an estimation of sales for a period of time for future. The sales planning is already described under previous chapter sales Budget.

Realistic sales plan is needed for achieving the company's goal. Only with the help of properly planned budgets the sales target can be achieved. A sales plan is detailed schedule of expected sales for coming year; it can provide basic management decision about marketing. For making a considerable sales plan a proper research of market as well as past trend analysis, study of market opportunities, threats and responsibility etc are needed.

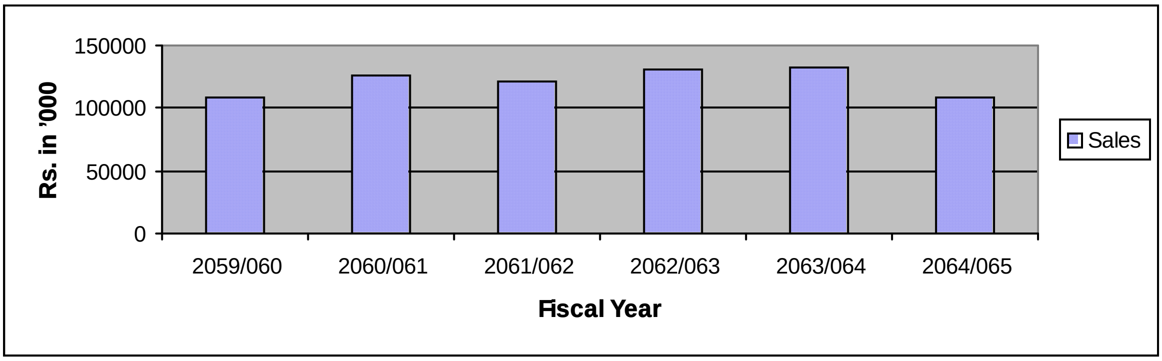
in the year 2061/062 there is decreased in sales in comparison to 2060/061 by 3.65%. Again in the year 2059/60 the company received a positive response in sales with an increase in sales by 8.2% and the total sales value of Rs. 130,997,000. In the fiscal year 2063/64 the sales trend increased is not up to the satisfactory level because only 0.57% increase in sales can be seen which is very low in comparison to fiscal year

2062/063, when there is 8.2% increase in sales. Similarly, in the fiscal year 2064/065 the company's sale decreased by 21.67% compared to the fiscal year 2063/064. The sales of biscuits were 1380 metric ton and confectioneries are 3 metric ton only. The total amount received was Rs. 108,291,000 in the fiscal year 2064/065.

It can be concluded out through sales table that even though the sales of biscuits are increasing trend, the sales of confectioneries are constantly decreasing except in the fiscal year 2062/063 during which sales increased by 150% the fiscal year 2061/062. The reason behind decrease in sales of confectioneries are due sale of imported confectioneries from India and third country, which are available at cheap price than Nebico product. The sales trend is depicted in figure 4.2. There is fluctuating in sales trend.

**Figure 4.2**

**Actual Sales Trend**




### 4.2.3 Analysis of Sales Plan and Actual Sales (Sales Analysis)

To forecast the future sales, the past sales need to be considered, to make the future prediction in a correct manner. For this the company needs to monitor closely the past sales along with budgeted sales. The table presented below helps to make comparison of budgeted and actual sales for last five fiscal years i.e. 2060/061 to 2064/065.

**Table 4.3**

**Budgeted and Actual Sales Value Evaluation**

(In Rs. '000')

| Details | Year | | | | |
|---|---|---|---|---|---|
| | 2060/2061 | 2061/2062 | 2062/2063 | 2063/2064 | 2064/2065 |
| Budgeted | 1,685 | - | 1,609 | - | 1,700 |
| Actual | 12 | | 10 | | 12 |
| Accomplishment | 124,852 | 99.36 | 120,330 | 99.39 | 129,540 |

Source: Nebico Pvt. Limited, 2060-2065

The above table 4.3 shows that the sales plan is made on the basis of past years sales because there was no specific or sudden change in sales other than 10% increase or decrease as sales planning policy. So it can be said that there is a great lack of effective sales plan for sales budget. In the fiscal year 2060/061 the company made extra sales by 2.09% on the budgeted sales, but in the later year the company made lesser sales than planned. This shows that the company has not made any such changes except increase or decrease in sales in special cases. All this shows that there is a lack of systematic and attractive sales plan. From the data it can be concluded due to lack of effective sales plan for sales budget, there is lesser amount of actual sales than budgeted sales except in 2060/061.

To figure out the nature of variability of budgeted and actual sales of different years, it necessary to calculate the arithmetic mean, standard deviation with co-efficient of variation.

**Figure 4.3**

**Budgeted and Actual Sales Value**

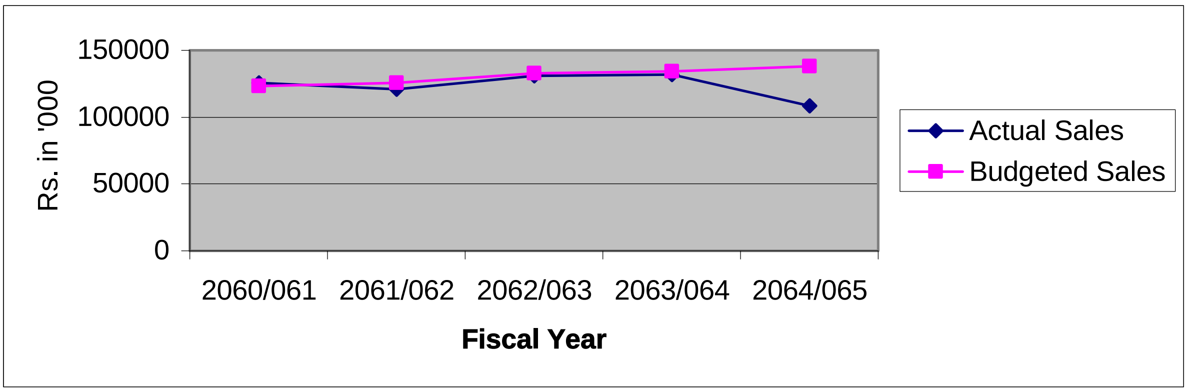



**Table 4.4**

**Summary of Statistical Calculation**

| Details | Budgeted sales 'X'<br>( In Rs '00,000') | Actual sales 'Y'<br>(In Rs. '00,000') |
|---|---|---|
| Mean<br>Standard deviation ( *a* )<br>Co-efficient variation (C.V) | 1,685 | - |
| Correlation ( r) | -.316 | |
| Probable error of correlation (P.E. r) | .271 | |

Source: Appendix - II

The above 4.4 table shows the coefficient of variation of budgeted sales (i.e. C.V 'X') and actual sales (i.e. C.V ‘Y’). Distribution with smaller C.V indicates less variability or uniformity. In this case, budgeted sales have less variability than the actual sales. The actual sales has higher variability rate showing higher percentage of coefficient of variation. Lower co-efficient variation also verifies the lower efficiency of planning.

To figure out the correlation between actual and budgeted sales, the popular statistical tool known as Karl Pearson's co-efficient of correlation denoted by 'r'. Correlation of co-efficient analyzes the degree and the direction of relationship between budgeted and actual sales variables. There should be positive or perfect positive correlation between the budgeted and actual sales. Negative correlation shows the variables are moving in opposite direction i.e. if the value of one variable increase, then the value of other variable decreases and vice versa. While calculating 'r' budgeted figure represented by 'X' are always said to be independent variable where as actual figure 'Y' are presumed to be dependent variable.

The probable error (P.E) of the correlation co-efficient (r) is the basis for the interpretation of its value. In other words, the significance of 'r' is tested with probable error of 'r'. The value of 'r' is less than 6XP.E of 'r' (i.e. -.316<1.626). This indicated that the value of ''r' is highly insignificant so in brief it can be said that the actual sales and budgeted sales move towards opposite direction.

The regression line can also be fitted to show the degree of relationship between the actual sales and the budgeted sales and to forecast the possible actual sales with the past given budgeted data. For this purpose, the actual sales have been assumed to be dependent on the budgeted sale, which is independent. The regression line of actual sales 'Y' on budgeted sales 'X' i.e. 'Y' on 'X' is as follows:

We have,

$$Y\ Z\overline{Y}\ X r \frac{X}{Y} (X\ Z\overline{X})$$

Y-1235.522=[0.271X85.57/54.54 (X-1310.436)]

Y-1235.522=[0.271X1.569 (X-1310.436)]

Y-1235.522=[0.4252 (X-1310.436)]

Y-1235.522=0.4252 X-557.196

Y=0.4252X+678.326

Through this regression equation, the relation between actual and budgeted sales can be distinguished; which helps to estimate the expected sales achievement for the coming period (i.e. fiscal year 2065/066) with the given value of targeted sales.

Lets -X' (budgeted sales for the fiscal year 2065/066) = 2019.58 lakh

Now, the expected sales,

Y=0.4252X +678.326

= (0.4252x2019.58) + 678.326

= 1537.051 lakh

## 4.3 Cost Plan of Nebico Private Limited

Cost planning and controlling should not focus only on decreasing the future costs or expenses but also need to focus on efficient and better utilization of limited resources. It should also focus the relationship between expenditures and benefits derived from those expenditures. Reduction of cost without considering its effect on benefits can cause higher cost due to break down, inefficient machines, frustrated employees, lower quality of production etc. Mostly costs are categorized into three sectors:-

a) Cost of sales

b) Administrative cost

c) Distribution cost

**a) Cost of sales:**

It is a production cost which is related with raw material, packing material, lab chemical, production salary and wages, fuel and oil, water cost, electricity cost, launch cost, rent on land and building, repair of machinery and miscellaneous cost etc.

**b) Administrative cost:**

It is a management cost. It has not been directly traceable to specific jobs and product; it is related with administrative salary and wages, operative allowances and incentives, provident fund, employees' subsidies, employee provident fund, technical and computer fees and other administrative related costs.

**c) Distribution cost:**

It affects the potential profit of a company. It is a significant portion of total cost. Distribution expenditures include all cost related to selling, distribution and delivery of product to customers. Distribution costs are not product cost and are not allocated to special products. So that minimization of the sales expenses directly creates impact on the selling price and profit.

Nebico Pvt. Ltd. classified its total cost into fixed cost and variable cost; categorized into cost of sales, administrative cost and distribution cost. For C.V.P analysis and sensitivity study of available data, the cost can he classified into following heads.

### 4.3.1 Fixed Cost Analysis

The fixed cost remain unchanged in total despite the changes in output level within a year; the fixed cost on per unit basis decreases as the level of activity increases and vice versa. Fixed cost of Nebico Pvt. Ltd. has also remains constant in total amount even when there is change in level of activity in each fiscal year. Due to confusion and difficulty involved in calculating fixed cost it is not expressed in per unit basis. Fixed cost in total varies for different fiscal year because of internal and external environment factor of company. The fixed costs are presented below on the basis of nature of costs:

**Table 4.5**
**Fixed Cost Analysis**

| Details | Years | | | | |
|---|---|---|---|---|---|
| | 2060/2061 | 2061/2062 | 2062/2063 | 2063/2064 | 2064/2065 |
| **1. Costs of sales:** | | | | | |
| Production salary and wages | 1,685 | - | 1,609 | - | 1,700 |
| Provident fund and subsidies. | 12 | | 10 | | 12 |
| Land and Building Rent | 124,852 | 99.36 | 120,330 | 99.39 | 129,540 |
| Repairs of Machinery and Building | 804 | 0.64 | 737 | 0.61 | 1457 |
| Miscellaneous | 125,656 | 100 | 121,067 | 100 | 130,997 |
| Total | 16.63% | | (3.65%) | | 8.2% |
| **2. Administrative:** Cost: | 1,685 | - | 1,609 | - | 1,700 |
| Salary and wages | 12 | | 10 | | 12 |
| Launch Cost (time basis) | 124,852 | 99.36 | 120,330 | 99.39 | 129,540 |
| Provident fund and employee subsidies | 804 | 0.64 | 737 | 0.61 | 1457 |
| Employees Quarter | 125,656 | 100 | 121,067 | 100 | 130,997 |
| Office repairs and maintenance | 68184 | 71538 | 71649 | 75948 | 73856 |
| Printing and stationary | 115884 | 115631 | 118537 | 124143 | 128835 |
| Telephone, wire and | 490562 | 490088 | 502074 | 525996 | 528550 |
| Advertisement, books and newspapers | 168952 | 127220 | 150297 | 146653 | 148778 |
| Licenses and Insurance Fees | 462376 | 375647 | 426263 | 424206 | 432607 |
| Hospitality and puja cost | 554379 | 543058 | 561601 | 585519 | 592314 |
| Vehicle Repair cost | 533456 | 414126 | 481280 | 473423 | 465233 |
| Adviser and auditing cost | 226000 | 209798 | 222612 | 229070 | 231581 |
| Bank commission and interest | 65728 | 79235 | 74663 | 81738 | 90535 |
| Training and dress cost | 138319 | 112532 | 127620 | 127041 | 128305 |
| Technical and computer fees | 1278972 | 1180317 | 1255957 | 1290549 | 135922 |
| Security cost | 642682 | 571162 | 619175 | 630296 | 628801 |
| Donation and membership fee | 120698 | 106211 | 115813 | 117568 | 122325 |
| Depreciation | 2200978 | 2146770 | 2436569 | 2413390 | 243028 |
| Interest | 3339274 | 3539756 | 3197225 | 3289837 | 3314627 |

| | | | | | |
|---|---|---|---|---|---|
| Miscellaneous | 34822 | 31371 | 33798 | 34512 | 36486 |
| Total | 15175822 | 14162952 | 14869500 | 15080973 | 17888129 |
| **3.Distribution costs:** | 3796447 | 3359267 | 4157138 | 4018190 | 3879578 |
| **4. Total fixed cost (1+2+3)** | 24591401 | 22950219 | 24894127 | 25003761 | 27855403 |
| **5.Increase/ decrease** in % | 27.24% | (6.67%) | 8.47% | .44% | 11.14% |

Source: Nebico Pvt. Limited, 2060-2065

The table no. 4.5 shows that there are variation in fixed administrative costs, cost of sales and distribution cost for different years because various internal and external factors of company effected to those cost from different angles. All those fixed cost are in fluctuating trend. In the above table, salary and wages, technical and computer fees, depreciation and interest cost contribute to increase amount of fixed administration cost for every year. Similarly, production salary and wages, provident fund and subsidies, repairs cost contribute to increase amount of fixed cost of sales for every year.

In the above table, the total fixed cost are in increasing trend in the fiscal year 2060/061, 2061/062, 2062/063, 2063/064 and 2064/065, but the fixed cost is in decreasing position in the year 2061/062. Taking the last year as base year for every year, total fixed cost are increased by 27.24%, 8.47%, 0.44% and 11.14% accordingly for the year 2060/061, 2061/062, 2062/063, 2063/064 and 2064/065 respectively. But in the year 2061//063. The fluctuation is made by various factors like different level of output, changes in the rate of different items every year, proportion of distribution cost and other factors etc.

### 4.3.2 Variable Cost Analysis

Variable costs are those cost which varies in direct proportion to change in level of activity or output. But per unit cost is constant. Nebico's variable costs per unit are different in different financial year due to internal and external environment of the company. As per company's cost detail sheet the variable cost are presented by nature and cost of sales, administrative cost and distribution cost.

**Table 4.6**
**Variable Cost Analysis**

(In Rupees)

| Details | Years | | | | |
|---|---|---|---|---|---|
| | 2060/2061 | 2061/2062 | 2062/2063 | 2063/2064 | 2064/2065 |
| **1.Cost of Sales:** | | | | | |
| Raw materials | 45394312 | 47218182 | 49189253 | 50423836 | 51142347 |
| Packing materials | 24212798 | 22673538 | 24902824 | 24863983 | 24991528 |
| Lab chemicals | 588099 | 605431 | 633929 | 648171 | 654527 |
| Production salary and | 7669365 | 7543325 | 8079944 | 8167973 | 8252177 |
| Fuel and oil | 434176 | 373386 | 428940 | 419023 | 421824 |
| Electricity cost | 6806750 | 6899248 | 7279683 | 7414557 | 7521636 |
| Water cost | 67745 | 63947 | 69963 | 69989 | 70585 |
| Launch cost (out put basis) | 1754378 | 1717661 | 1844089 | 1862052 | 1867188 |
| Miscellaneous | 97309 | 93166 | 101162 | 101576 | 105265 |
| Total | 87024932 | 87187884 | 92529787 | 93971160 | 95027077 |
| **2. Administrative Cost:** | | | | | |
| Salary and wages | 1457753 | 1290849 | 1401889 | 1425779 | 1419537 |
| Employee bonus (out put basis) | 258718 | 177810 | 220917 | 210516 | 217768 |
| Operating allowance and incentives | 513359 | 465570 | 499681 | 511220 | 509261 |
| Fuel and moving cost | 1259851 | 1141400 | 1225627 | 1253621 | 1279541 |
| Miscellaneous | 14924 | 13445 | 14485 | 14791 | 15263 |
| Total | 3504605 | 3089074 | 3362599 | 3415927 | 3441370 |
| **3.Distribution costs:** | 8858375 | 7838290 | 9699987 | 9375775 | 9197457 |
| **4.Total Variable costs:** (1+2+3) | 99387912 | 98115248 | 105592373 | 106762862 | 107665904 |
| Increase/ Decrease in % | 12.84% | (1.28%) | 7.62% | 1.11% | 0.846% |

Source: Nebico Pvt. Limited, 2060-2065

The table 4.6 shows the fluctuating trend in the variable cost sheet. Variation in variable cost of sales, administrative cost and distribution cost for different year is because of different external and internal factors. Price of raw material are in increasing manner, electricity cost, fuel oil, salary and wages etc has greater contribution towards increase in amount of cost of sales every year. Similarly, the administrative cost: salary wages, fuel and moving cost, operating allowance and incentives has greater influences over the increment of variable cost each year.

Variable cost is in increasing manner in fiscal year 2060/061, 2062/063, 2063/064 and 2064/065 by 12.84%, 7.62%, 1.11% and 0.846% respectively taking last year as base year. But in the year 2061/062 the total variable cost is decreased by 1.28% i.e. Rs 1272,664 then the fiscal year 2060/061, sub-factor cost of sales and distribution cost has greater contribution towards increment of total variable cost.

Even though administrative variable cost is in increasing trend, it has lower proportion in total variable cost then cost of sales and distribution cost of variable cost.

### 4.3.3 Semi-variable Cost Analysis

Costs containing both the element of fixed and variable are considered as semi-variable or mixed cost. In semi-variable cost some portion is of fixed nature and the rest are of variable nature. According to the nature and uses the semi-variable cost of Nebico Pvt. Ltd. are listed below:-

**Table 4.7**
**Semi-variable Cost Analysis**

(In Rupees)

| Details | Years | | | | |
|---|---|---|---|---|---|
| | 2060/2061 | 2061/2062 | 2062/2063 | 2063/2064 | 2064/2065 |
| **1.Costs of Sales:** | | | | | |
| Salary and wages | 10956236 | 10776179 | 11542776 | 11668533 | 11827610 |
| Miscellaneous | 324362 | 310552 | 337207 | 338588 | 340232 |
| Total | 11280598 | 11086731 | 11879983 | 12007121 | 12167842 |
| **2.Administrative costs** | | | | | |
| Salary and wages | 4859178 | 4302831 | 4672966 | 4752597 | 4816589 |
| Miscellaneous | 49746 | 44816 | 48283 | 49303 | 50136 |
| Total | 4908924 | 4347647 | 4721249 | 4801900 | 4866725 |
| **3.Distribution Costs** | 12654822 | 11197557 | 13857125 | 13393965 | 13604516 |

| | | | | | |
|---|---|---|---|---|---|
| **4.Total Mixed Cost (1+2+3)** | 28844344 | 26631935 | 30458357 | 30202986 | 30639083 |
| **5.Increase/ Decrease** | 39.13% | (7.67%) | 14.37% | (0.84%) | 1.45% |

Source: Nebico Pvt. Limited, 2060-2065

The classification of cost into fixed and variable is very important to plan and control of cost. It helps to determine the volume of operation required maintaining the desired profitability. There are various methods to segregate the mixed cost, but 'Degree of variability method' contains 30% and 70% proportion is suitable for the organization like Nebico. Nebico has not maintained any clear- cut boundaries about cost classification into fixed and variable component.

On the above table 4.7, in case of semi- variable production, salary and wages are segregated by 70% of variable cost and 30% of fixed cost in proportion. On the other hand, administration salary and wages are segregated by 30% of variable cost and 70% of fixed cost portion. Similarly, cost of sales miscellaneous cost and administration miscellaneous cost are segregated into 30% variable and 70% of fixed cost in proportion. The semi-variable distribution cost is segregated by 70% of variable cost and 30% of fixed cost proportion. All the segregated semi-variable cost are included in above variable cost sheet and fixed cost sheet tables. All the semi-variable cost is classified into fixed and variable proportion using 'Degree of Variability method'. The degree of variability is determined by the Nebico's own staff’s intuition, hunches, prediction, judgment and nature of expenses.

As per Nebico's employee and manager's its major costs are operating, administrative and distribution cost because of difference in variable cost and fixed cost in every fiscal year. Mixed cost is segregated only through 'Degree of variability method'. Practice of other segregation method is almost impossible due to its fluctuating nature in Nebico Pvt. Ltd.

### 4.3.4 Production Salary and Wages Cost Analysis

On the basis of their sexes the workers are distinguished into two groups i.e. male and female. Out of 189 employees there are only 31 females in the organization. Distribution of workers as skill - wise and sex wise are given below:

## Table 4.8

**Sex -wise and Skill - wise Workers Distribution**

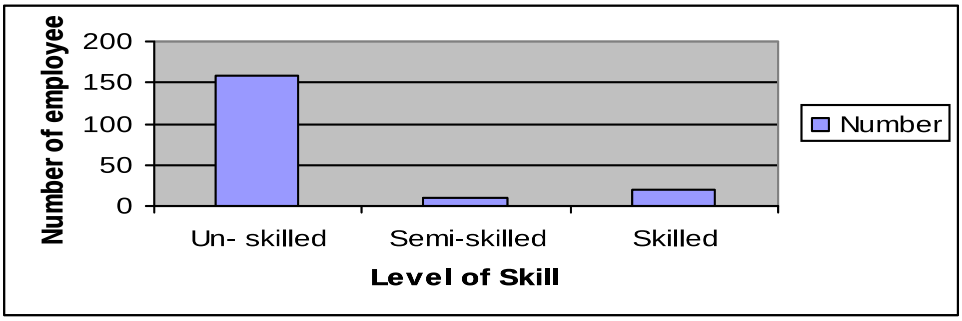
| Serial number | Level of Skill | Male | % | Female | % | Total | % |
|---|---|---|---|---|---|---|---|
| 1 | Un- skilled | 1,685 | - | 1,609 | - | 1,700 | - |
| 2 | Semi - skilled | 12 | | 10 | | 12 | |
| 3 | Skilled | 124,852 | 99.36 | 120,330 | 99.39 | 129,540 | 98.88 |
| 4 | Highly -skilled | 804 | 0.64 | 737 | 0.61 | 1457 | 1.12 |
| | Total | 125,656 | 100 | 121,067 | 100 | 130,997 | 100 |

Source: Nebico Pvt. Limited

Above table 4.8 represents, large portion of workers are un-skilled i.e. 159 out of 189 workers, which contains 84.13% in total. Among that 159 unskilled workers: male are 132 which is 83.54% and female are 27 which is 87.1% in present distribution of male and female. There are 6 semi- skilled male and 4 semi- skilled female i.e. 3.8% and 10% respectively. Only 20 male are skilled with no skilled female present. No highly skilled people are present in the group. Though highly skilled workers have no mention in the above group, the company might cover them in lowest number. The level of skill workers are depicted in figure 4.4.

**Figure 4.4**

**Skill- wise Workers Distribution**




Company lacks presence of skilled workers as well as highly skilled workers and female participation in the work force. On the basis of amount or wages earned, the workers are divided into four groups. As per company's rules and regulation minimum wages fixed on per month basis for the unskilled workers is Rs 4000, semi - skilled workers Rs 4500, skilled workers Rs 5000 and highly skilled workers Rs. 6000. The distributions of wages to total 189 workers are presented below:

**Table 4.9**
**Wages Structure**

| Serial number | Wages per month | Number of Workers | % of Distribution |
|---|---|---|---|
| 01. | Rs 4000- 4500 | 159 | 84.13 |
| 02. | Rs 4500- 5000 | 10 | 5.29 |
| 03. | Rs 5000- 5500 | 18 | 9.53 |
| 04. | Rs 5500-6000 | 2 | 1.05 |
| Total | | 189 | 100 |

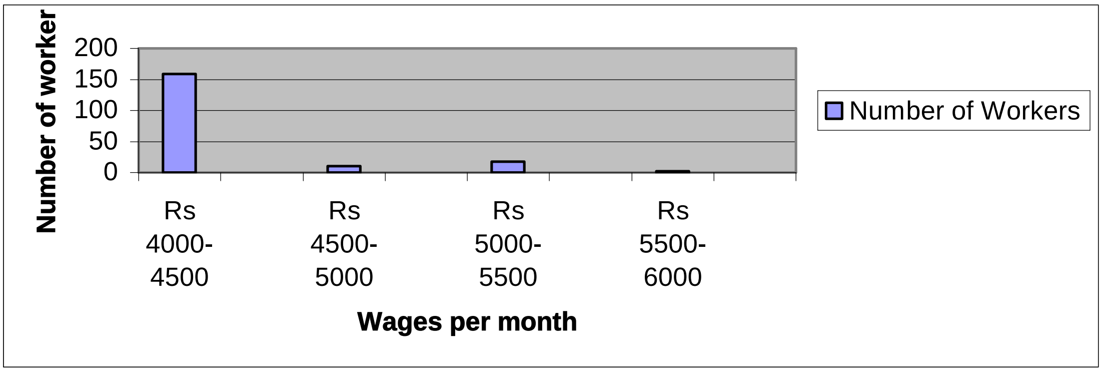
Source: Nebico Pvt. Limited

Above table 4.9 describes that only Rs 4000-4500 is earned by majority of the workers which is 84.13% out of total 189 workers. 10 person earned between Rs 4500-5000 which is 5.29% of the total workers 20 workers are considered as high pay workers, they earn from Rs 5000-5500 which is 9.53% of the total 100%. Few people are paid the highest amount i.e. Rs 5500-6000 and they are 1.05%.

Considering the wage payment of the employee, they are very low and not up to the standard so they are asked if they are satisfied with the wages or not? The answer we get was mostly negative i.e. they are not satisfied with their pay cheque, only few of them are satisfied, employees belonging to the low skills are mostly provided with the low income so they are not satisfied at all in comparison to the skilled or semi- skilled groups having income i.e. Rs 4000 to 4500. No any such drastic changes in wages are made from last few years. The wage structure of workers is depicted in figure 4.5.

**Figure 4.5**

**Wages Structure of Employee**



## 4.4 Inventory Consideration of Nebico Private Limited

Operation of manufacturing company is almost impossible without inventory. Major parts of working capital are invested at inventory of the company. Stock in hand of raw material, goods in process, and finished goods are all considered as inventory of a company. The main purpose of holding inventories by the manufacturing company is to continue work and supply finish goods regularly without interruption. So it can be said that inventory is maintained against uncertainties. If there are no adequate raw inventories may lead to burden on cost price of the product so the company needs to foresee and calculate cost, demand, supply and its effect before making inventories. The investments on inventories need to be minimized at the minimum level. Over investment or under investment on inventories may be a conflicting factor but acute inventory management is the prime necessity of every organization. Through JIT system or Zero based budgeting method the inventories can be maintained at low margin and cost burden is also reduced.

The sales, production and inventory are inter-related with each other. If any one of them changes the other will make change automatically in volume. In Nebico Pvt. Ltd., the inventories are expressed in total amount 'Rs' and not in volumes. Finished good inventories bridge the gap between production and sales. If production is higher than sales, the over production is transferred into inventory and if sales exceeds production, the excess sales is recovered from inventory supply. So certain level of inventory is always needed for smooth sales operation of the company. Mostly nature of operating company and its raw material affects the size of inventory. Like for instance wheat flour is the prime raw material for Nebico so the company needs to make adequate stock of wheat at its season of wheat production.

If the raw material used for production is seasonal than the production activities are operated only for few months in a year, at this situation the size of finished goods inventory will automatically exceeds. Following table represents the actual inventory amount of Nebico from the fiscal year 2060/061 to 2064/065.

**Table 4.10**
**Total Inventory/ Stock Level**

('In Rupees')

| Fiscal Year | Opening Inventory | Closing Inventory |
|---|---|---|
| 2060/061 | 1,685 | - |
| 2061/062 | 12 | |
| 2062/063 | 124,852 | 99.36 |
| 2063/064 | 804 | 0.64 |
| 2064/065 | 125,656 | 100 |

Source: Nebico Pvt. Limited, 2060-2065

The above table 4.10 shows that the inventory amount of Nebico Pvt. Ltd. is in decreasing trend each year. But the inventory in the year 2064/065 shows drastic change in inventory amount by more than 500%, it may be due to less sales and other external factors.

The decreasing trend of closing inventory of fiscal year 2061/062 from 2060/061 is by 4.26%. Closing inventory amount shows decrease by 3.75% in the fiscal year 2062/063 compared to last year. Again in the fiscal year 2060/061 it shows inventory decrease by 4.47% compare to last fiscal year amount. But in the fiscal year 2064/065 closing inventory is increased by 500% (i.e. Rs 127,24,824) it may be due to other factors compare to fiscal year 2063/064 (i.e. Rs 2646,050). The total of inventories during the fiscal year 2064/065 is 11.75% of total sales value i.e. Rs 10,82,91,000.

### 4.5 Nebico's Profitability Ratio Analysis

An analysis of financial statement with the help of ratio is termed as financial analysis. A mathematical relationship between two related items expressed in quantitative form is also known as ratio analysis. The ratio is the measurement of quantitative relationship between two or more items of financial statement connected with each other. Ratio analysis is a technique of analysis and interpretation of financial statement. To evaluate the performance of an organization by creating the ratio from the figure of different accounts consisting in balance sheet and income statement is known as ratio analysis.

From four broad groups of ratios, profitability ratio is of great use. It shows the overall efficiency of the business organization by return generated from sales and investment. Higher the profitability ratio shows greater response. The relation of the return of firm either its sales or its equity or its assets are known as profitability ratio.

It is of two types: Profitability in relation to sales and profitability in relation to investment. But here we are concentrating only on profitability in relation to sales of Nebico Pvt. Ltd.

**a) Gross Profit Margin Ratio:**

Gross profit margin ratio expresses the relationship between gross profit margin and the sales amount during the year. Gross profit margin ratio can be expressed as:

Gross profit margin ratio (GPMR) = Gross Profit / Sales Amount

"GPMR" for the base year 2060/061 = 33011,936 / 1256,56,000

= 26.27%

Higher ratio percent of base year 2060/061 shows positive sign towards good management of Nebico. But company has low gross profit ratio in 2064/065, that reflects higher cost of goods sold and inefficiency of the company comes out. To avoid low gross profit company need to purchase goods at favorable terms and prices.

In the base year 2060/061, Nebico's data represents favorable gross profit margin ratio of 26.27% which is higher than reference ratio 25.0%. Gross profit margin of last five year from 2060/061 to 2064/065 are 26.27%, 23.50%, 24.89%, 24.19% and 6.63% respectively for 2060/061, 2061/062, 2062/063, 2063/64 and 2063/065.

**Table 4.11**
**Income Statement**

(In rupees)

| (Year<br>Particular | 2060/2061 | 2061/2062 | 2062/2063 | 2063/2064 | 2064/2065 |
|---|---|---|---|---|---|
| 1.Sales Revenue | 125656.000 | 121067,000 | 130997,000 | 131750,000 | 108291,000 |
| 2. Less : Cost of Sales: | | | | | |
| 3.Variable Cost | (87024,932) | (87187,884) | (92529,787) | (93971,160) | (95027,077) |
| 4.Fixed Cost | (5619,132) | (5428,000) | (5867,489) | (5904,598) | (6087,696) |
| 5.Gross Profit (1-3-4) | 33011.936 | 32599,724 | 28451,116 | 31874.242 | 7176,227 |
| 6.Less: Other Operating Costs: | | | | | |
| **7.Administrative Costs:** | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 8.Variable Cost | (3504,605) | (3362,599) | (3089,074) | (3415,927) | (3441,370) |
| 9.Fixed Cost | (15175,822) | (14162,952) | (14869,500) | (15080,973) | (1788,812) |
| **10.Distribution Cost:** | | | | | |
| 11.Variable Cost | 1,685 | - | 1,609 | - | 1,700 |
| 12.Fixed Cost | 12 | | 10 | | 12 |
| **13.Net profit before tax (5-7-10)** | 124,852 | 99.36 | 120,330 | 99.39 | 129,540 |
| **14.Gross profit margin ratio** | 804 | 0.64 | 737 | 0.61 | 1457 |
| **15.Operating ratio** | 125,656 | 100 | 121,067 | 100 | 130,997 |
| **16.Operating leverage** | 5.24 | 6.48 | 6.85 | 7.63 | 7.99 |

Source: Nebico Pvt. Limited, 2060-2065

**(b) Net Profit margin ratio:**

Net profit margin ratio establishes a relationship between net profit after tax and the sales amount. Net profit margin ratio can be expressed as follows in formula:-

Net profit margin ratio (NPMR) = Net profit after tax/Sales amount "NPMR" for the base year 2060/061 = (Net profit before tax - Tax amount) / (Sale amount)

= 1676,687-(25% of 1676,687) / 1256,56,000

= 1%

Data of base year 2060/061 shows that the company has low percentage of net profit margin ratio i.e. 1%, which shows low overall efficiency of the business. To achieve higher net profit the companies need to utilize all the resources available. Net profit margin is in fluctuating trend i.e. 0.0095%, 0.29% in the fiscal year 2060/061, 2061/062 and 2062/063. But it is nil in past two years i.e. 2063/064 and 2064/065.

**(c) Operating ratio:**

Operating ratio expresses the relationship between total operating expenses and the sales amount. Operating ratio shows operational efficiency of the management. This ratio is calculated by:

Operating ratio = Total operating cost / Sales amount

Operating ratio for the base year 2060/061 = (Cost of goods sold + other Operating Expenses)/ sales amount

= 926,44,064+ 313,35,249 / 1256,56,000

= 123979313 / 125656000

= 98.67%

In the fiscal year 2060/061, the company's data presents high percentage of operating ratio, which leads to low operating profit. Low operating ratio indicates the higher operating profit, so minimum percentage of operating ratio is preferable. But it is in increasing trend for the past five year i.e. 98.67%, 99.99%, 99.61%, 100.013% and 119.5% for 2060/061, 2061/062, 2062/063, 2063/064 and 2064/065.

## 4.6 Operating Leverage of Nebico Private Limited

A ratio between contribution margin and earning before interest and tax (EBIT) is known as operating leverage. A ratio between the percentage change in EBIT and percentage change in sales amount is known as operating leverage. Operating leverage of Nebico Pvt. Ltd. can be expressed as:

Degree of operating leverage (DOL) = (Sales - Variable cost) / EBIT "DOL" for the base year 2060/061= (125656000-99387912) / (1676687+3339274)

= 5.24

The greater degree of operating leverage indicates the greater amount of business risk. For the base year 2060/061 operating leverage of Nebico is 5.24 times, which indicated that if sales increases by 100% the amount of EBIT increases by 524 time more. It shows that Nes indicates that Degree of operating leverage is in increasing manner.

## 4.7 Cost -Volume -Profit Analysis of Nebico Private Limited

The cost -volume -profit analysis is the process of studying relationship between cost, volume and profit. CVP analysis is a powerful instrument in managerial decision making. CVP analysis deals with how profit and cost changes with the change in volume. It helps to determine minimum sales requirement to avoid loss, especially helps in cost control, cost reduction and profit planking. In other words, CVP analysis helps to analyze the interrelationship between Costs, volume, profit and to attain the objective of profit maximization and control program.

**Table 4.12**
**Income Statement for the year 2060/061 to 2064/065**

('In Rupees')

| Details | Years | | | | |
|---|---|---|---|---|---|
| | 2060/2061 | 2061/2062 | 2062/2063 | 2063/2064 | 2064/2065 |
| 1. Sales Amount | 125656000 | 121067000 | 130997000 | 131750000 | 108291000 |
| 2. Variable Costs | | | | | |
| Cost of Sales | 8858375 | 7838290 | 9699987 | 9375775 | 9197457 |
| Administrative Costs | 99387912 | 98115248 | 105592373 | 106762862 | 107665904 |
| Distribution Costs | 8858375 | 7838290 | 9699987 | 9375775 | 9197457 |
| Total Variable Cost | 99387912 | 98115248 | 105592373 | 106762862 | 107665904 |
| 3. Contribution Margin (1-2) | 26268088 | 22951752 | 15404627 | 24987138 | 625096 |
| 4. Fixed Costs: | | | | | |
| Cost of Sales | 8858375 | 7838290 | 9699987 | 9375775 | 9197457 |
| Administrative Costs | 99387912 | 98115248 | 105592373 | 106762862 | 107665904 |
| Distribution Costs | 26268088 | 22951752 | 15404627 | 24987138 | 625096 |
| Total Fixed Cost | 24591401 | 22950219 | 24894127 | 25003761 | 27855403 |
| Less: Oilier Income | (817627) | (683601) | (628562) | (867325) | (804674) |
| Net Fixed Cost | 23773774 | 22266618 | 24265565 | 24136436 | 27050729 |
| 5. Profit (3-4) | 2494314 | 685134 | 1139062 | 850702 | (26425633) |
| 6. P/V Ratio = (CM/Sales) | 0.2090 | 0.1896 | 0.1939 | 0.1897 | 0.577 |
| 7. BEP= (Net Fixed Cost / PV ratio) | 113750115 | 117439968 | 125144740 | 127234771 | 46881679 |
| 8. Margin of Safety=(AS- BES) | 11905885 | 3627032 | 5852260 | 4515229 | 61409320 |
| 9.% of (BEP/Sales) | 92.41% | 93.46% | 94.21% | 94.62% | 38.04% |
| 10.% of (MOS / Sales) | 9.47% | 3.0% | 4.47% | 3.43% | 5.67% |

Source: Nebico Pvt. Limited, 2060-2065

Planning of profit is possible only when the management has desired recent information about the cost of product, both fixed and variable cost as well as sales price of the product. C.V.P analysis helps to determine the break even point at which total revenue is exactly equal to total cost or the point at which losses ends and profit begins. C.V.P analysis helps to determine most profitable alternative margin of safety and profit at different levels of sales. Also develops the optimum combination of product mix at desired profit.

### 4.7.1 Contribution Margin

Contribution Margin is the excess of sales amount over its variable cost. It is the difference between the portions or Rupees that is left after variable expenses are deducted. In other wordsessed as:

Contribution Margin = Sales cost - Variable cost

'CM' for the base year 2060/061 = Rs (125656000- 99387912)

= Rs 262,68,088

The above table no. 4.12 shows that the calculation of contribution margin of Nebico Pvt. Ltd. for the last five year 2060/061 to 2064/065. Contribution margin for five year shows that there is fluctuation in trend. They are Rs 26268,088, Rs 22951,752, Rs 25404,627, Rs 24987,138 and Rs 625,096 for the fiscal year 2060/61, 2061/062, 2062/063, 2063/064 and 2064/065 respectively. High contribution margin shows positive signal for high profit and low contribution margin leads to no profit or loss situation. Above table shows that in the year 2060/061 there is high contribution margin but in the year 2064/065 there is no profit at all or we can say there is loss in the year 2064/065.

### 4.7.2 Profit -Volume -Ratio

Profit volume ratio establishes a relationship between the contribution margin and the sales volume. The two factors profit and volume are interconnected as well as dependent with each other. Profit depends upon sales, sales price to a great extent depends upon the volume of production. It can be expressed as:

Profit volume ratio (P/V Ratio) = C.M / Sales

'P/V Ratio for the base year 2060/061 = 26268,088 / 125656,000

= 0.2090

From above calculation we figured out the profit volume ratio for the base year 2060/061 of Nebico is 0.2090 i.e. 20.9%. Similarly, through table 4.12 we can figure out the P/V ratio of last five years i.e. from 2061/062 to 2064/065 is 0.1896, 0.1939, 0.1897 and 0.577 respectively. It can be clearly seen in the table 4.12 that P/V ratios are in fluctuating trend. P/V ratio is maximum in the year 2060/061 and it's negative in the year 2064/065.

The company always tries to reduce variable cost and increase the value of ratio to achieve more profit. Any increase in contribution margin would mean increase in profit only because fixed cost are assumed to be constant at all levels of production in the year. The ratio would also remain constant at different levels of production since variable cost as a proportion to sales remains constant at various levels too.

### 4.7.3 Break Even Point

BEP is a point at which the firm's total revenue are exactly equal to total cost, yielding zero income or the point at which losses ceases and profit begins. Through contribution margin approach, break even point can be expressed as:

B.E.P in amount = Net fixed cost / P/V Ratio

**Table 4.13**

**Break Even Sales on Total Sales for the Year 2060/061 to 2064/065**

(In Rs. 000')

| Year | Total Sales | BEP Sales | % of BEP on Total Sales |
|---|---|---|---|
| 2060/061 | 123086 | 113750.115 | 92.41 |
| 2061/062 | 125647 | 117439.968 | 93.46 |
| 2062/063 | 8858375 | 7838290 | 9699987 |
| 2063/064 | 99387912 | 98115248 | 105592373 |
| 2064/065 | 26268088 | 22951752 | 15404627 |

Source: Nebico Pvt. Ltd. and Appendix-1

Therefore, the break even point of Nebico Pvt. Ltd for the base year 2060/061 is Rs 113750,115. From table 4.13, we can see the break even point of last five fiscal years i.e. from 2060/061 to 2064/065. The Break even points in rupees are Rs 113750,115, Rs 117439,968, Rs 125144,740, Rs 127234,771 and Rs 412,02381 for the year 2060/061, 2061/062, 2062/063, 2063/064 and 2064/065 respectively. Break even point is in increasing trend from the past five years. Break even point (in amount) for the fiscal year 2060/061 is the lowest but the break even point for the fiscal year 2063/064 is the highest among the five years BEP. The percentage of BEP on total sale is increasing trend from 2060/061 to 2063/064 and it decreased in 2064/065. To achieve profit, actual sales revenue needs to exceed the break even point (amount) of that fiscal year. Due to small difference between sales revenue and Break even Point amount of Nebico, it has been able to receive low amount of profit every year; but in the year 2064/065 Nebico fails to achieve the B.E.P (amount) so the company has to suffer loss in the year.

Through another met

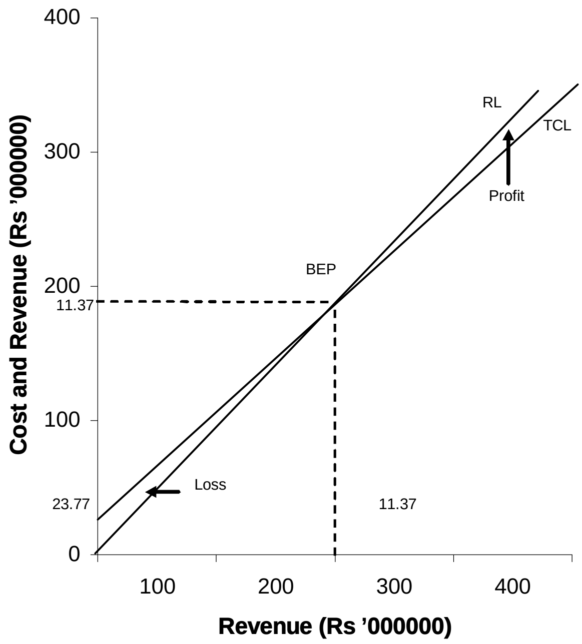



Figure 4.6: BEP in Graph for FY 2060/61

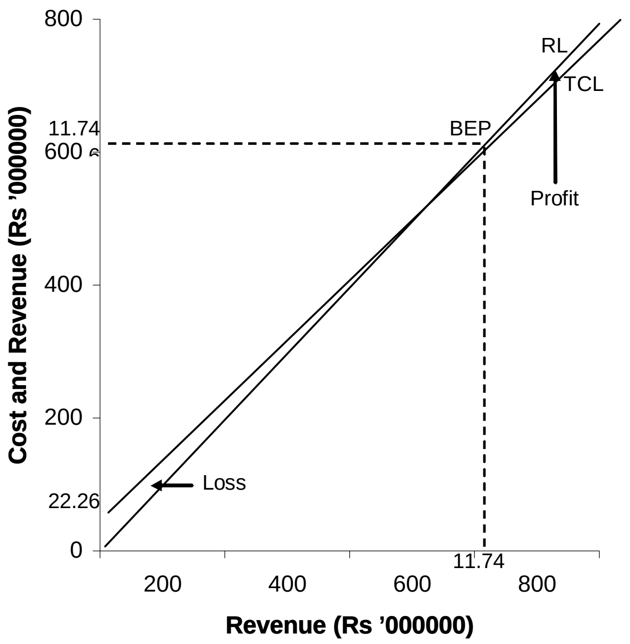
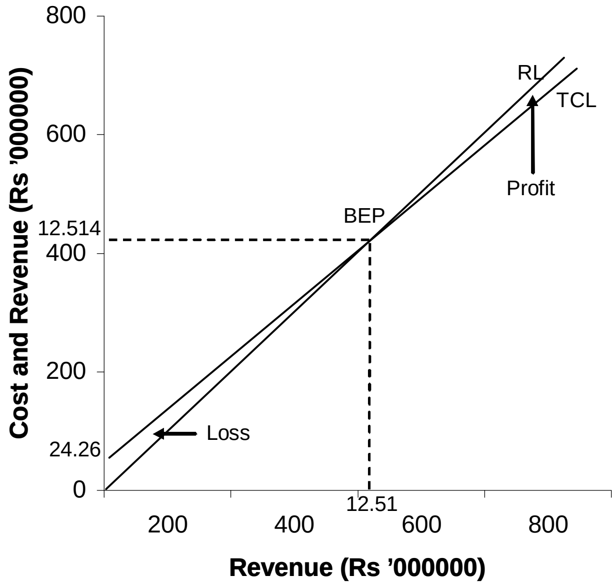



Figure 4.7: BEP Graph for FY 2061/62



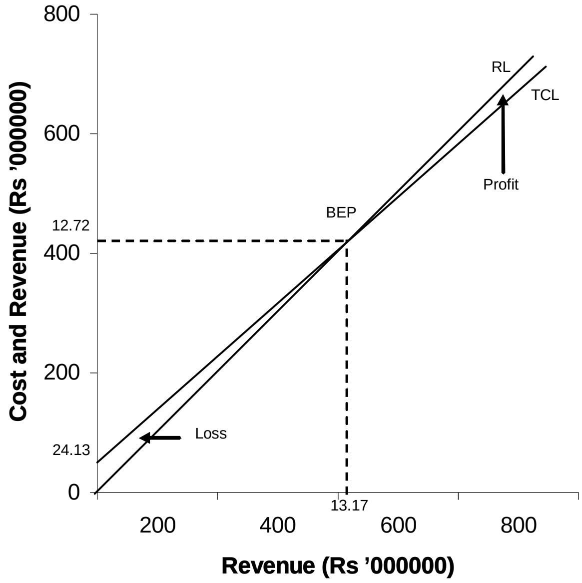




**Figure 4.9: BEP Graph for FY 2063/064**

**Figure 4.8: BEP Graph for FY 2062/063**

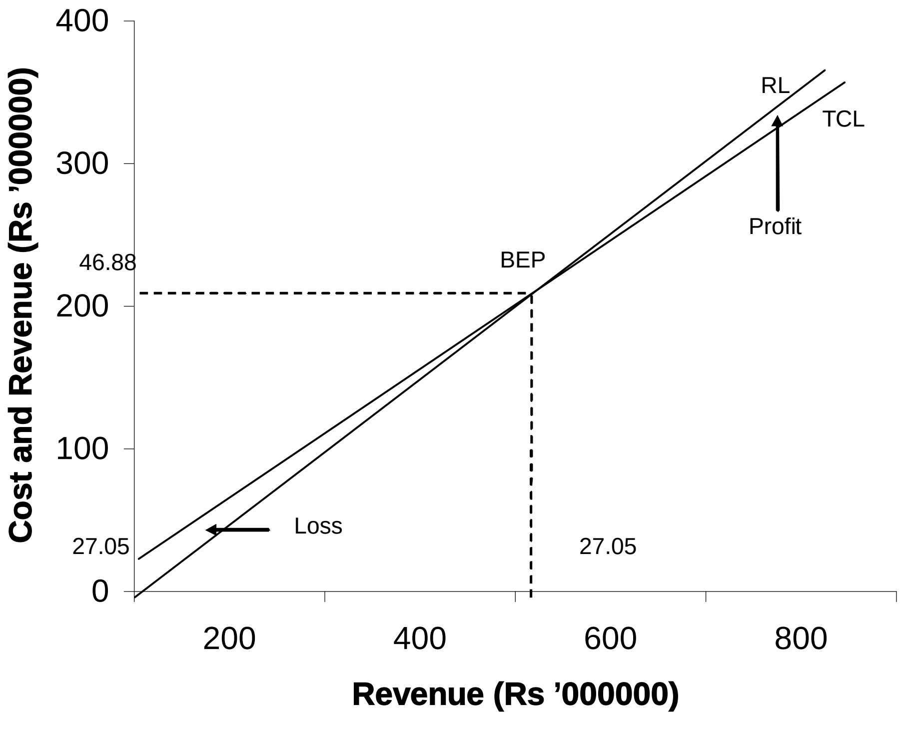



**Figure 4.10: BEP Graph for FY 2064/065**

Where sales revenue is shown as 'X-axis and cost amount is shown as 'Y-axis'. In the above chart, total cost curve is in increasing trend as increase in sales value. But fixed cost curve is parallel to X-axis because fixed cost curve is in upward direction. Total cost curve of base year 2060/061 starts from fixed cost Rs 23773,774. When sales revenue is zero, fixed cost is equal to total cost i.e. Rs 23773,774. Sales revenue curve originate from the origin because when there is no sales volume there is no sales revenue. As the sales volume starts taking size sales revenue starts increasing so the sales revenue line slopping towards upward position at right side. The meeting point of total cost curveales point to gain profit; the above table shows that the actual sales is greater than total cost, which generates profit of Rs. 2494,814. But if total cost exceeds the actual sales and lies below break even point the company has to suffer loss.

### 4.7.4 Margin of Safety

The difference between the actual sales revenue and the break even sales revenue is known as margin of safety. It is the position above the Break even point. Safety margin can be expressed as:

Margin of Safety (MOS) = Actual sales - Break even sales

'MOS' for the base year 2060/061
= Rs (1256, 56,000 -1 137, 50,115)
= Rs 119,05,885

**Table 4.14**

**Margin of Safety**

| Fiscal Year | Total Sales | Margin of safety | Percentage |
|---|---|---|---|
| 2060/061 | 123086000 | 11905885 | 9.67 |
| 2061/062 | 125647000 | 3627032 | 2.88 |
| 2062/063 | 132824000 | 5852260 | 4.40 |
| 2063/064 | 134461000 | 4515229 | 3.35 |
| 2064/065 | 108291000 | (1217725127) | -11.24 |

Source: Derived from Table 4.12

For better profitability situation larger margin of safety is required. The above calculation sows that the margin of safety for the base year 2060/061 is Rs. l 19, 05,885. But in the table 4.14, it shows that the margin of safety is in fluctuating trend for the last five fiscal year i.e. 2060/061 to 2064/65. The amount of margin of safety are Rs 11905,885, Rs 3627,032, Rs 5852,260, Rs 4515,229 and Rs (1217725,127) for the year 2060/061, 2061/062, 2062/063, 2063/064 and 2064/065 respectively.

Similarly percentage margin of safety to sales is also fluctuating trend. It ranges from 9.67% to -11.24%. Comparing the last five fiscal years, the fiscal year 2060/061 shows high marg safety.

## 4.8 Change Effect and Relationship of CVP Analysis with Its Sub-Factors

Profit is the main function among the variety of factors. Factors of C.V.P analysis can be affected by change in volume, cost and prices. Profit may be affected by the change in price, volume, variable cost, fixed cost and combinations of factors; which shows proportionate relationship, positive relationship, inverse relationship and no relationship.

### 4.8.1 Change Effect of Fixed Costs

Only change in fixed cost and other factors remaining constant or unchanged shows effect in BEP and profit. If fixed cost rises in any special conditions like change in management policy, inflation and due to some external factors; the BEP will rise and profit falls. But if fixed cost falls, however, it will lower the BEP and raises profit. Any change in fixed cost does not influence the profit volume ratio. Usually fixed cost does not change; much or not in fluctuating position, oilier (hen in special circumstances. Let’s increase or decrease fixed cost by 10% for the base year 2060/061 and other things remaining constant or same we gel the following result:

**Table 4.15**

**Income Statement with Change in Fixed Cost For Base Year- 2060/061**

(In Rupees)

| **Details** | Change of Sales Value | | |
|---|---|---|---|
| | Original | 10% Increase | 10% Decrease |
| **Sales Value** | 125656000 | 125656000 | 125656000 |
| **Less: Variable Cost** | (99387912) | (99387912) | (99387912) |
| **Contribution Margin** | 8858375 | 7838290 | 9699987 |
| **Less: Fixed Cost ( Net)** | 99387912 | 98115248 | 105592373 |
| **Profit / Loss** | 26268088 | 22951752 | 15404627 |
| **P/V Ratio =(CM/Sales)** | 0.2090 | 0.2090 | 0.2090 |
| **BEP = (Net Fixed Cost)/ (P/V Ratio)** | 113750115 | 125125124 | 1023775105 |

Source: Nebico Pvt. Limited, 2060-2065

Above table 4.15 shows that, with 10% increase in fixed cost leads to again 10% increase in Break even cost and with 10% decrease in fixed cost it leads to 10% decrease in Break even cost point. So we can say that there is proportionate relationship between Break even point and fixed cost, where one leads to change another proportionately.

### 4.8.2 Change in Effect of Variable Cost

Increase change in variable cost decreases contribution margin, profit and increases BEP. Chain effect appears with any change in variable cost towards profit, other things remaining constant if variable cost is lowered then, P/v ratio will increase, BEP will lower and profit rises. B0/061 keeping other things same or constant, we achieve the following result:

**Table 4.16**

**Income Statement with change in Variable Cost For the Base year**

('In Rupees')

| **Details** | Change of Sales Value | | |
|---|---|---|---|
| | Original | 10% Increase | 10% Decrease |
| **Sales Value** | 125656000 | 125656000 | 125656000 |
| **Less: Variable Cost** | (99387912) | (109326703) | (89449121) |
| **Contribution Margin** | 8858375 | 7838290 | 9699987 |
| **Less: Fixed Cost ( Net)** | 99387912 | 98115248 | 105592373 |
| **Profit / Loss** | 26268088 | 22951752 | 15404627 |
| **P/V Ratio =(CM/Sales)** | 8858375 | 7838290 | 9699987 |
| **BEP = (Net Fixed Cost)/ (P/V Ratio)** | 113750115 | 182875185 | 81978531 |

Above table 4.16 shows that, with 10% increase in variable cost, increases BEP by 60.77%, which indicates that there is positive relation between variable cost and break even amount. With 10% decrease in variable cost, it decreases the BEP by 27.93%. There is no proportionate change in BEP with change in Variable cost like fixed cost.

### 4.8.3 Change Effect of Sales Value

Any positive change in sales will lead to increase in profit volume ratio, lowering the BEP and finally increasing profit. On the other hand if any negative change appears in sales value, it results decrease in P/V ratio, increases BEP and decreases Profit, Increase in sales is mostly desirable whereas decrease in sales is not much thinkable. To see the effect of change in sales value, we increase and decrease sales of base year 2060/061 by 10%, making other things constant. We get the following result:

**Table 4.17**
**Income Statement with Change in Sales Value For the Base Year**

('In Rupees')

| **Details** | Change of Sales Value | | |
|---|---|---|---|
| | Original | 10% Increase | 10% Decrease |
| **Sales Value** | 125656000 | 138221600 | 113090400 |
| **Less: Variable Cost** | (99387912) | (99387912) | (99387912) |
| **Contribution Margin** | 8858375 | 7838290 | 9699987 |
| **Less: Fixed Cost ( Net)** | 99387912 | 98115248 | 105592373 |
| **Profit / Loss** | 26268088 | 22951752 | 15404627 |
| **P/V Ratio =(CM / Sales)** | 8858375 | 7838290 | 9699987 |
| **BEP = (Net Fixed Cost)/ (P/V Ratio)** | 113750115 | 84604178 | 196153251 |

Source: Derived from Table 4.12

Above table 4.17 shows that, with the 10% increase in sales value 26% decrease in break even amount is received where as 10% decrease in sales value leads to 72.44% increase in break even amount. So we can say that there is inverse relationship between sales price and break even point.

### 4.9 Analysis of Primary Data

The outcomes of the questionnaires distributed to the sample size of 15 employees and management who used to work in Nebico are obtained.  Many transactions are involved in budgeting procedure. Some organizations follow one type of procedure and other follow the next. Different organization follow the different procedure as their requirement criteria of planning external and internal forces, planning of different activities, using of different managerial planning tools, adoption of controlling practice, practice of decision-making and planning, clarity of sales goals, responsibility accepted by different level of management, commitment for development of budget by dilyze the production procedure of Nebico Pvt. Limited, researcher used the questionnaire filled by the respondents. The outputs of questionnaire are presented below and analyzed one by one by using mean and percentage.

### 4.9.1 Responsibility for Preparing Sales Plan

The following table 4.18 shows the responsibility for preparing sales plan in Nebico.

**Table 4.18**

**Responsibility for Preparing Sales Plan in Nebico**

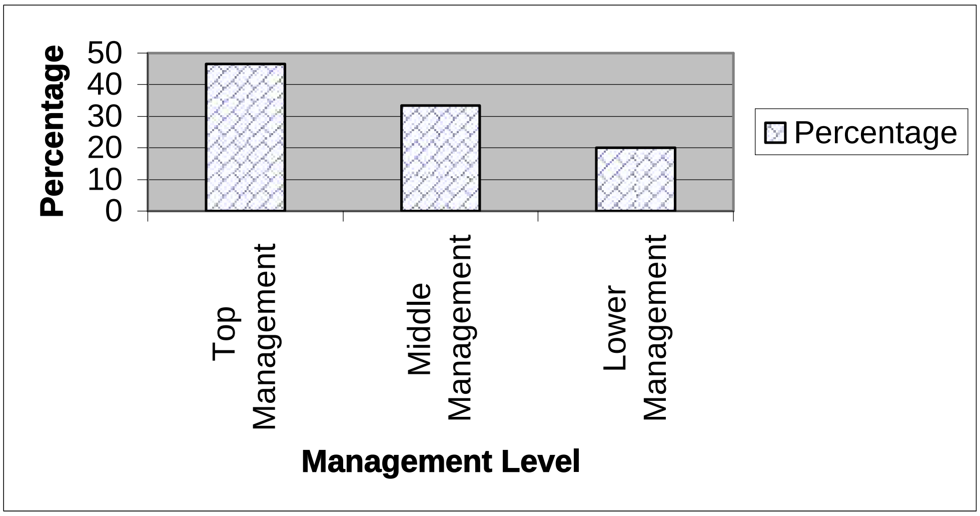
| Management level | No of respondents | Percentage |
|---|---|---|
| Top management | 7 | 46.6 |
| Middle management | 5 | 33.4 |
| Lower management | 3 | 20 |
| Total | 15 | 100 |

Source: Opinion Survey, 2009

The table 4.18 shows the 46.6% respondents pointed for top management, 33.4% for middle management and 20.0% for lower management. So the decision should be top management is more responsible for preparing sales plan. The responsibility for preparing sales plan in Nebico is depicted in figure 4.11

**Figure 4.11**

**Responsibility for Preparing Sales Plan in Nebico**




### 4.9.2 Criteria Followed by Nebico in Preparing Sales Plan

Different organization follows the different criteria in preparing sales plan. The table 4.19 shows the criteria followed by Nebico while preparing sales plan.

**Table 4.19**

**Criteria Followed by Nebico in Preparing Sales Plan**

| Criteria | Frequencies | | | | | Total score | Mean |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | | |
| Intuition | 4 | 2 | 2 | 7 | - | 42 | 2.8 |
| Past experience | - | - | - | 3 | 12 | 72 | 4.8 |
| External expertism | 2 | 4 | 7 | - | 2 | 41 | 2.7 |
| Statistical method | - | 3 | 7 | 5 | - | 47 | 3.13 |

Source: Opinion Survey, 2009

The table 4.19 shows the different mean value for different criteria. The mean value of intuition, past experience, external experts and statistical method are 2.8, 4.8, 2.7 and 3.13 respectively. Past ex prepare sales plan is statistical method, which have the second highest mean value 3.13. And Nebico give less priority for intuition and external experts.

### 4.9.3 External Forces in Plan

External forces are very important for each and every organization. Nebico is also affected by different types of external forces, such as political, legal, economic etc. external forces considered by Nebico to prepare sales plan is shown by the table 4.20

**Table 4.20**

**Consideration of External Forces in Preparing Sales Plan**

| Forces | Frequencies | | | | | Total score | Mean |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | | |
| Economic | - | - | 2 | 4 | 9 | 67 | 4.46 |
| Socio-cultural | 2 | 3 | 4 | 6 | - | 44 | 2.93 |
| Political & Legal | - | 4 | - | 8 | 3 | 55 | 3.66 |
| Competition | 10 | 2 | 2 | 1 | - | 24 | 1.60 |

Source: Opinion Survey, 2009

The table No. 4.20 shows the total score and mean value of different external forces considered by Nebico. The mean value of economic forces, socio-cultural forces, political- legal forces and competition are 4.46, 2.93, 3.66 and 1.60 respectively.

Among them, mean value of economic forces is highest (4.46). So we can make conclusion that the Nebico getition. So the Nebico give less priority for competition.

### 4.9.4 Consideration Factor of Sales Plan

It is necessary to give consideration for different internal factor to prepare sales plan. Planner should consider financial strength, managerial strength, technological strength etc. Different factor considered by Nebico are shown in Table No. 4.21

**Table 4.21**

**Consideration Factor of Sales Plan**

| Consideration factor | Frequencies | | | | | Total score | Mean |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | | |
| Financial Strength | 2 | 2 | 2 | 4 | 5 | 53 | 3.53 |
| Managerial strength | - | 2 | 4 | 6 | 3 | 55 | 3.66 |
| Technological Strength | 3 | 3 | 3 | 4 | 2 | 44 | 2.93 |

Source: Opinion Survey, 2009

The table 4.21 shows the total score and mean value of different consideration factor. Mean value of financial strength, managerial strength and technological strength are 3.53, 3.66 and 2.93 respectively. Among them, mean value of financial strength is highest, so we can make conclusion that Nebico highly considers the financial strength, than managerial strength which have mean value of 3.53. And Nebico give less priority for technological strength.

### 4.9.5 Clarity of Sales Goals

For effective sales plan, sales goal should be clear and reliable. If there is vague sales goals then planning of sales will be very difficult. Table No 4.22 shows the clarity of sales goals of Nebico.

**Table 4.22**

**Clarity of Sales Goals of Nebico**

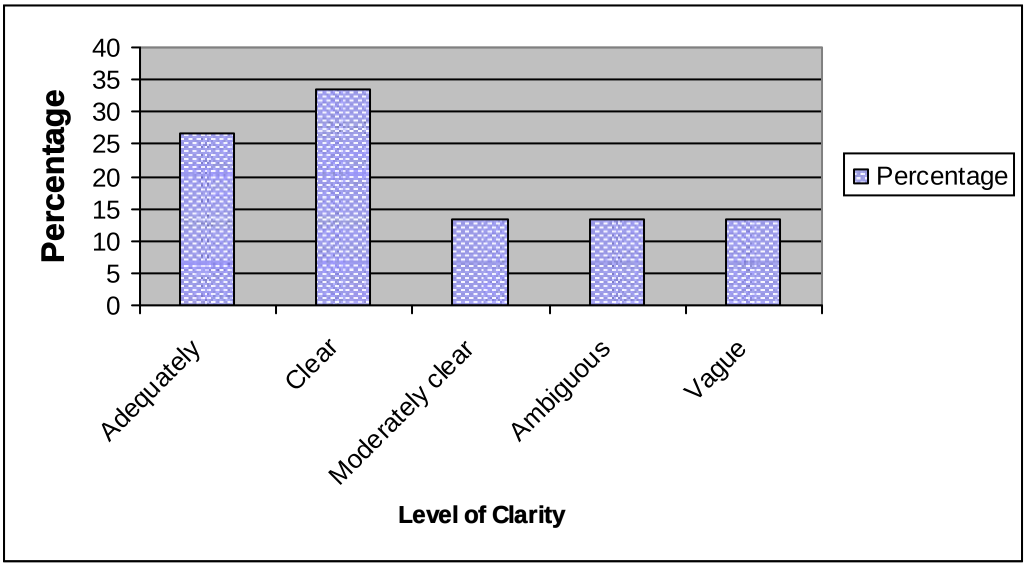
| Level of clarity | No of respondents | Percentage |
|---|---|---|
| Adequately | 4 | 26.7 |
| Clear | 5 | 33.4 |
| Moderately clear | 2 | 13.3 |
| Ambiguous | 2 | 13.3 |
| Vague | 2 | 13.3 |
| Total | 15 | 100 |

Source: Opinion Survey, 2009

The table 4.22 shows that 33.4% respondents express their view for clear sales goals and 26.7% respondents express their view for adequately clear sales goals. So the conclusion is the sales goal of Nebico is clear. Clarity of sales goals of Nebico is shown in figure 4.12

**Figure 4.12**

**Clarity of Sales Goals of Nebico**




### 4.9.6 Practice of Decision Making and Planning

The table No. 4.23 shows the practice of decision making and planning of Nebico.

**Table 4.23**

**Practice of Decision Making & Planning of Nebico**

| Decision making practice | No of respondents | Percentage |
|---|---|---|
| Top management makes all decision and just communicates to other | 4 | 26.7 |
| Top management along with middle level managers make decisions | 9 | 60.0 |
| Participation of managers of all levels are encouraged and sought | 2 | 13.3 |
| Total | 15 | 100 |

Source: Opinion Survey, 2009

The table No. 4.23 shows the maximum percentage i.e 60.0% of respondents express their view for top managemement along with middle level managers make decision in Nebico.

### 4.9.7 Top Management's Commitment in the Implementation of Plans

Without proper implementation, all kinds of plan will be valueless. So the implementation factor is very important for each and every plan. Following table shows the top management's concern and commitment in the implementation of plans.

**Table 4.24**

**Top Management Concern and Commitments in the Implementation of Plans**

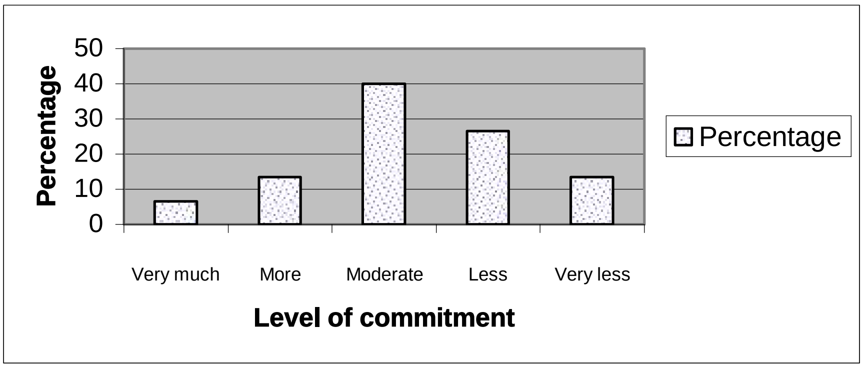
| Level of commitment | No of respondents | Percentage |
|---|---|---|
| Very much | 1 | 6.6 |
| More | 2 | 13.4 |
| Moderate | 6 | 40.0 |
| Less | 4 | 26.6 |
| Very less | 2 | 13.4 |
| Total | 15 | 100 |

Source: Opinion Survey, 2009

The table No. 4.24 shows the different level of commitment and the number of personnel for corresponding level of commitment. According to this table, 40.0 % personnel express their view for moderate commitment in implementation of plans. The level of management commitment is depicted in figure 4.13.

**Figure 4.13**

**Top Management Concern and Commitments in the Implementation of Plans**




### 4.9.8 Seriousness Shown by Organization in Tackling the Probable Problems

Most of organization faces different kinds of problems in decision-making process. Nebico cannot be the exception. The table 4.25 shows the seriousness of Nebico in tackling the probable problems.

**Table No. 4.25**

**Seriousness Shown by Nebico in Tackling the Probable Problem**

| Level of seriousness | No of respondents | Percentage |
|---|---|---|
| Very much serous | 2 | 13.4 |
| Much serious | 3 | 20.0 |
| Moderately serious | 7 | 46.6 |
| Less serious | 2 | 13.4 |
| No serious | 1 | 6.6 |
| Total | 15 | 100 |

Source: Opinion Survey, 2009

The table No 4.25 shows the level of seriousness and the number and percentage of respondent for corresponding level of seriousness. The highest percentage of respondent is 46.6 %, which is lies in the row of moderately serious, so we can make decision that Nebico is ico in tackling the probable problem is shown in figure 4.14.

**Figure 4.14**

**Seriousness Shown by Nebico in Tackling the Probable Problem**


## 4.9.9 Planning of Activities

To achieve the sales goal of organization, proper planning of different activities is essential. Without proper planning of different activities organization cannot achieve their sales goals. Different activities planning by Nebico to achieve sales goals are shown in table No. 4.26.

**Table 4.26**
**Planning of Activities to Achieve the Sales Goals**

| Activities | Frequencies | | | | | Total score | Mean |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | | |
| Marketing | 7 | 2 | 1 | 3 | 2 | 36 | 2.40 |
| Financial | 5 | 2 | 3 | 2 | 3 | 41 | 2.73 |
| Managerial | 3 | 2 | 3 | 6 | 1 | 45 | 3.0 |
| Human resource | 5 | 3 | 1 | 5 | 1 | 39 | 2.6 |

Source: Opinion Survey, 2009

The table No 4.26 shows the total score and means value of marketing activities, financial activities, managerial activities and human resource activities and the mean value of them are 2.40, 2.73, 3.0 and 2.6 respectively. The highest value is 3.0. This lies on the row of managerial strength. It shows Nebico gives high priority for planning of managerial strength. And the lowest value of mean is 2.40, which, is lies on the row of marketing activities that means Nebico give less priority for marketing activities to achieve the sales goal.

### 4.9.10 Managerial Planning Tools

Different managerial planning tools are used in different company. Nebico also use different planning tools but all are not equally important Managerial planning tools used by Nebico are shown in the table No.4.27 as follows:

**Table 4.27**
**Managerial Planning Tools**

| Planning tools | Frequencies | | | | | Total score | Mean |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | | |
| Responsibility Accounting | 4 | 3 | 1 | 5 | 2 | 43 | 2.86 |
| CVP Analysis | 4 | 1 | 2 | 4 | 4 | 48 | 3.20 |
| Flexible budgeting | 3 | 4 | 5 | 3 | - | 38 | 2.53 |
| Zero-based budgeting | 7 | 1 | 1 | 2 | 4 | 40 | 2.66 |

Source: Opinion Survey, 2009

The table 4.27 shows the total score and mean value of different managerial planning tools. The mean value of responsibility accounting CVP analysis flexible budgeting, and zero-based budgeting are 2.86, it lies on the row of CVP Analysis that means Nebico gives high priority for CVP Analysis. The lowest mean value is 2.53, which lies on the row of flexible budgeting, so we can make conclusion that Nebico give less priority for flexible budgeting.

## 4.10 Major Findings of the Study

The major findings of the study based on above study are as follows:

**Findings from Secondary Data:**

- There is great lack of skilled employees to prepare budgeting and analyze their financial position.
- Nebico has relatively high fixed cost (i.e. Interest, depreciation, repair, salary and wages, provident fund subsidies etc). The Company has no detailed lists of fixed, variable expenses. No specific list is available for mixed expenses planning which is significant in profit planning and control.
- Sales trend of the company is fluctuating and lacks efforts to improve them.
- Variable cost of Nebico is proportionately higher than fixed or total costs, hampering the overall company's profit. Like other manufacturing company of Nepal, Nebico has no effective plan and technique to reduce costs.
- Goals and objectives of Nebico are not clearly communicated to all levels of management.
- The Company lacks effective inventory policy. Raw material handling, stocking and controlling system are not systematic and efficient.
- Lacks new and systematic techniques of forecasting sales and purchase.
- Nebico is not utilizing its full capacity. No reasonable practice of segregating costs into fixed and variable or controllable and uncontrollable.
- Only one way communication channel is followed in the company and BOD holds the authority to fix prices and recruitment of employees.
- Most employees are male and employees are classified as per their skill, female participation in work force is very low.
- Nebico products - biscuits and confectioneries are supplied all over Nepal and in foreign countries too. Therefore Nebico is partially successful to substitute the important of biscuits and confectioneries.

- Nebico has tried to adopt new technology for improving quality products.
- Financial state of the company is at declining stage and requires new and effective marketing strategies to improve current position through utilizing available resources to the possible extent.
- Proper co-ordination among the production, administrative, distribution, sales and inventory department is required.

**Findings from Primary Data:**

The outcomes of the questionnaires distributed to the sample size of 15 employees and management who used to work in Nebico are obtained. Different organization follow the different procedure as their requirement criteria of planning external and internal forces, planning of different activities, using of different managerial planning tools, adoption of controlling practy accepted by different level of management, commitment for development of budget by different management level, participation of personnel in decision-making and implementation and other so many factors are involved in budgeting procedure. To analyze the production procedure of Nebico Limited, researcher used the questionnaire filled by the respondents. The major findings from primary data are presented as follows:

- The study showed the 46.6% respondents pointed for top management, 33.4 % for middle management and 20.0 % for lower management. So the decision should be top management is more responsible for preparing sales plan.
- The study showed the different mean value for different criteria. The mean value of intuition, past experience, external experts and statistical method are 2.8, 4.8, 2.7 and 3.13 respectively. Past experiences have highest mean value i.e. 4.8. It means that Nebico uses the past experience as basis to prepare sales plan. The next important criteria followed by Nebico to prepare sales plan is statistical method, which have the second highest mean value 3.13. And Nebico give less priority for intuition and external experts.
- The study showed thepolitical- legal forces and competition are 4.46, 2.93, 3.66 and 1.60 respectively. Among them, mean value of

economic forces is highest (4.46). So we can make conclusion that the Nebico give high consideration for the economic force. And the lowest value is 1.60 for competition. So the Nebico give less priority for competition. For more effective presentation we can use the trend diagram for total score computed in external forces in preparing sales plan.

- The study showed the total score and mean value of different consideration factor. Mean value of financial strength, managerial strength and technological strength are 3.53, 3.66 and 2.93 respectively. Among them, mean value of financial strength is highest, so we can make conclusion that Nebico highly considers the financial strength, than managerial strength which have mean value of 3.66. And Nebico give less priority for technological strength.
- The study showed that 336.4 % respondents express their view for clear sales goals and 26.7 % respondents express their view for adequately clear sales goals. So the conclusion is the sales goal of Nebico is clear.
- The study showed the maximum percentage is the row of top management along with middle level managers makes decision. So the conclusion is top management along with middle level managers make decision in Nebico.
- The study showed the different level of commitment and the number of personnel for corresponding level of commitment. According to this table, 13.3 % personnel express their view for moderate commitment in implementation of plans.
- The study showed the level of seriousness and the number and percentage of respondent for corresponding level of seriousness. The highest percentage of respondent is 46.0 %, which is lies in the row of moderately serious, so we can make decision that Nebico is moderately serious for tackling the probable problems.
- The study showed the total score and means value of marketing activities, financial activities, managerial activities and human resource activities and the mean value of them are 2.40, 2.73, 3.0 and 2.6

respectively. The highest value is 3.0. This lies on the row of managerial strength. It shows Nebico gives high priority for planning of managerial strength. And the lowest value of mean is 2.40, which, is lies on the row of marketing activities that means Nebico give less priority for marketing activities to achieve the sales goal.

The study showed that the mean value of responsibility accounting, CVP analysis, flexible budgeting, and zero-based budgeting are 2.86, 3.20, 2.53 and 2.66 respectively. Among these mean value 3.20 is the highest and it lies on the row of CVP Analysis that means Nebico gives high priority for CVP Analysis. The lowest mean value is 2.53, which lies on the row of flexible budgeting, so we can make conclusion that Nebico give less priority for flexible budgeting.

# CHAPTER- V

# SUMMARY, CONCLUSION AND RECOMMENDATIONS

## 5.1 Summary

Business organization establishes profit objectives and builds budget plans so that the objective may be realized. In profit planning, management must know the selling price of the unit of product, the variable cost to make and sell it, and the difference between the selling price and the unit variable cost. In short management must know what the contribution margin is for each unit of each product line that is handled. Several factors affect profits. They are selling price, the number of unit sold (quantity), the unit variable costs, the total fixed costs and the combination in which the various product lines are sold. All these factors must be considered in profit planning.

Cost Volume Profit Analysis, a most important tool of profit planning means of predicting the effect of changes in costs and sales level on the income of business. In its simplest form, it involves the determination of sales level at which a company neither earns a profit nor incurs a loss, or in other word the point at which it breaks even.

The objective behind this research study is to examine the effectiveness of profit planning and control with the help of cost, volume and profit analysis tools in Nebico Pvt. Ltd. Focus of this study is to ever company of biscuits and confectioneries. As per the nature and its requirement, the secondary and primary data with descriptive and analytical approach for cost analysis, sales analysis, inventory analysis, profitability ratio analysis, contribution margin analysis, P/V ratio analysis, break even analysis and salary wages cost analysis etc are used. Table analysis and questionnaire distribution were made for gathering information and tabulating them as per requirement.

From the above study and analysis, PPC analysis shows that Nebico has low contribution margin, low P/V ratio. High break even point and low margin of safely. The sensitivity test of CVP analysis shows that if variable and fixed cost increases, the break even point will also increases and if they were decreased then, the break even point also decreases. But at the time of increase in sales price the break even point will decrease. It indicates that the relationship between cost and break even point is positively correlated where as relationship between sells price and break even point is negatively correlated. To fulf. Company is facing loss in the year 2064/065. With the help of other incomes company manages to make small profit in the year 2063/064 which is not satisfactory. Company's condition is very poor and requires changes to improve its position. Due to lack of detailed information and extra cost burden, company is unsuccessful in practicing Profit planning and control tools like Cost, volume and profit analysis.

## 5.2 Conclusion

The profit planning analysis tool was applied in the Nebico Private Limited to find out whether the tool was practicing or not. Nebico Private Limited, one of the leading manufacturing industry which is the largest player in Nepalese biscuits market and for decades has been synonymous with quality product, had not practicing CVP analysis tool to forecast desire profit. Cause of non- practicing the CVP analysis tools, costs were not segregated as fixed cost and variable cost where there were not proper mechanism to segregate semi-variable or semi-fixed costs in to fixed and variable costs. To solve the problems regarding CVP analysis and not application, some objectives was formulated: cost segregation as fixed and variable, unit variable by adopting suitable mechanism and computation of CVP analysis by its extension tools. To fulfill the objectives of the study, historical as well as managerial research design was adopted. Primary as well as secondary sources of data were used.

Nebico Private Limited has substantial gap between budgeted and actual achievement. Company's goals and objectives are clearly communicating with its employees. Various popular profit planning tools like JIT, Zero based budgeting, CVP analysis are not practiced in Nebico Pvt. Ltd. f income is spent over paying interest. Even though the operating and maintenance cost are in rising trend. No specific technique is utilized till now to control cost or reduce them. Classification of cost is not maintained on scientific and systematic basis rather they are based on hunches and prediction of employees. Nebico still lags behind for the realistic budget and not been able to practice CVP analysis as a tool to profit planning and control.

Study of Nebico Pvt. Ltd through CVP analysis shows, company has low and decreasing contribution margin affecting profit. Even though company has succeeded to some portion to increase contribution margin by increasing sales revenue but the increasing fixed cost has increased BEP to high level. The sensitivity of CVP analysis in response to change in fixed cost is proportionate where as it is very high in response to change in sales revenue and variable cost. Through increase in sales revenue, the company can increase profit and safety margin. CVP relationship is not considered in Nebico while developing sales plan, production plan and pricing strategy. The company is at risky situation as there is a certain percentage decrease in sales revenue and certain percentage increase in total cost, company has suffered loss in the year 2061/062. To avoid further losses in coming years Nebico has to increase gap between total revenue and total cost; by taking action to stabilize fixed cost and decrease variable cost. Company's management need lo take corrective action as soon as possible by controlling costs and their behavior through effective technique, if not Nebico have to bear further losses in coming years.

## 5.3 Recommendations

As per study of Nebico Pvt. Ltd. utilizing to measure effectiveness of profit planning and control, it is very necessary for the organization to develop and implement the CVP analysis process in the organization. Nebico is having hard time to adjust Profit planning and control as company is going through a tough phase of its life. Nepal is moving towards globalization with membership of WTO, Nepalese company now have to prepare themselves to compete with International market through better management policy and scientific technologies. Application of advance profit planning tools could be a better help while struggling with limited resources and its availability. Profit planning and control also helps organization to achieve goals in a cut-throat competition without much difficulty. Nepalese organization lacks effective tools for its improvement. Thus the following recommendations are made according to the above research study.

- Like other manufacturing companies in Nepal, Nebico lacks Profit planning and control tools for import substitution and increase in profit. Better planning tools are needed to be utilized like CVP analysis and Budgeting.
- As broad objectives are the basic guideline for the organization,

Nebico needs to clearly define them and assign duties and responsibilities to its staffs.

- Nebico should follow CVP analysis to reach Break even point which helps in preparation of sales plan, purchase plan, production plan and setting prices of its products.
- Classifications of controllable, uncontrollable, fixed and variable expenses are needed to be done within a specific frame work of time period.
- Big portions of investments are done over fixed costs which stress profit so Nebico need to diversify its investments and make optimum use of fixed costs to generate maximum profit.
- Separate cost control department need to be established to control cost, which will divide the cost by product and can give suggestion on dropping or developing new products at time.
- Lacks effective inventory policy, therefore effective tools like JIT system, zero base budgeting etc need to be implemented for efficient inventory management and controlling.
- Decentralization of decision making power and two way communication channel is required.
- Lack of better training programs is hampering employee's proficiency and productivity so regular training need to be introduced and produce more skilled workers in the organization.
- Wages payment is not at satisfactory level. To increase profit, Nebico need to minimize wasteful expenses and adopt new effective planning processes.
- Market research is required for the company's products for better market opportunities.
- Company need to restructure its capital structure as huge amount is paid as interest on long term loan every year. Such burden could be minimized through internal financing.
- Regular market surveys need to be performed for products demand, supply and pricing under market research and development department. Through market research and development department new product line and opportunities could be captured.
- Profit can't happen immediately so systematic approaches need to be

made towards comprehensive profit planning.

- Systematic performance report should be followed by company. Be more conscious about poor performances and take corrective actions immediately and timely as per requirement.
- Improvement maintenance of quality products are recommended as Nebico is selling its product all over Nepal and exporting too.

# BIBLIOGRAPHY

**Books:**

Ackoff, R.I., (1970). **A Concept of Corporate Planning**, New York: John Willey and Sons.

Charles T. H., (1992). **Cost Accounting A Managerial Emphasis**, New Delhi: Prentice Hail of India

Corafas Dimitris N., (1992). **Hand Book for Scientific and Technical Personnel**, TAB Professional and Reference Book, New York: Mc Grawhill.

Drucker, D.T. and Schafer E.F. (1959), **Management and Cost Accounting**. UK: Business Press, Thomson Learning.

Edwards, R.S. and Hines. J S. (1957). **Budgeting in Public Authorities,** New York***:*** RIPA George Allen and Unwin.

Garrison, R.H. (1985), **Managerial Accounting**, New York: John Wiley and Sons Inc.

Garth, J. N. (1992). **Budgeting for National Development** (Edited by Moquit. A.) Pakistan: Hullhock Publishing Co. Limited.

Glenn, Handerson, V.; Trenne Pohl; Gray, L and Wert, James E. (1986). **An Introduction to Financial Management,** Original Edition, Washington: D.C: Addison Weley Publishing Company.

Grace, C.E., (1992). **Management Control**, New York: Mitchell and Co.

Gray, Jack and Johnston, Kenneth S.: (1973). **Accounting and Management Action**, New York: Mc Grawhill Publishing Company.

Gupta, S.P. (1992), **Management Accounting**. Agra: Shahitya Bhawan Publication.

Halsall, J.H. (1974). **How to Prepare an Operating Budgets,** London***:*** Longman Group Limited.

Hampton, John J. (1976). **Financial Decision Making,** Virginia: Reston Publishing Company Inc.

Hilton R.W. (1997), **Managerial Accounting**, *USA:* McGraw-Hill Company Inc.

Holmes, J.C. (1970). **Strategic and Operational Planning System: Principle and Practices,** London: Mac Millan Publication.

Jack, R. and Raymond Deam. (1984). **Managerial Economics,** *New Delhi:* Prentice Hall of India (Pvt.) Ltd.

Kothari, C.R. (1990), **Research Methodology: Methods and Techniques**. New Delhi: Willey Eastern Limited.

Kuchhal, S.C.(1976). **Corporate Finance,** Twelfth Edition, Allahabad:. Codeine Publishing House.

Lynch, R.M. and Williamson, R.W. (1999), **Accounting for Management**. New Delhi: Tata McGraw Hill Publishing Company Limited.

Lynch, Richard M. and Willamson Rebort W. (1984). **Accounting for Management,** Third edition, New Delhi: Tata McGraw Hill publishing Co. Ltd.

National Planning Commission (2002). **Tenth Plan**, Kathmandu: Nepal Government.

Ninemeier, Jack D. and Schmidgall, Raymond S., (1984). **Basic Accounting Standards,** London: West port Air Publishing Company.

Pandey, I.M., (1983), **Management Accounting**. New Delhi: Vikas Publishing House Pvt. Ltd.

Pant, P.R. (2003), **Business Environment in Nepal**. Kathmandu: Buddha Academic Publishers and Distributors Pvt. Ltd. Publication.

Stanton. L.R.(1987). **Long Range Corporate Planning.** London: The Production Engineer Quoted in; Corporate planning.

Terry, George R., (1986). **Principles of Management**, Fifth edition, Illinois: Richard D. Irwin Inc. Home Wood.

Thomas, William E. (Ed.), (1992). **Readings in Cost Accounting Budgeting and Control**, Sponsored and Published by American Accounting Association, New York: John Willey and Sons.

Van Home, J.C. (1976), **Financial Management and Policy**. New Delhi: Prentice Hall of India Pvt. Ltd.

Vinayakam, N. and Sinha I.B., (1992). **Management Accounting Tools and Techniques,** New Delhi: Himalayan Publishing House, India.

Webster, A.W., (1992). **Business Budgets and Budgetary Control**, London: Sir Issac Pitman and Sons Ltd.

Welsch, G.A. Hilton, R.W. and Gordon, P.N. (1992), **Budgeting Profit Planning and Controlling**. New Delhi: Prentice Hill of India Pvt. Ltd.

Welsh, Glenn A.; Hilton, Ronald W.; and Gordon, Paul N., (1998). Fifth edition, **Budgeting: Budgeting and Control**, New Delhi: Prentice Hall of India.

Wolff Howard K. and Pant Prem Raj (2003). **Social Science Research and Thesis Writing,** Kathmandu: Buddha Academy Enterprises.

**<u>Thesis:</u>**

Baral, Durga Prasad, (2003), **Profit Planning and Control of Nepal Telecommunication Cooperation**. An Unpublished Master's Degree Thesis, Shanker Dev Campus, Kathmandu.

Bhattarai, Kalpana, (2004), **Budgeting in Public Enterprises: A Case Study of Nepal Telecommunication Cooperation**. An Unpublished MAB Thesis, Shankar Dev Campus, Kathmandu.

Dhakal, Dipendra Raj, (2008), **Cost Volume Profit Analysis as a Toll to Measure the effectiveness of Profit Planning and Control: A Case Study of Gorkhakali Rubber Udhyog Limited**. An Unpublished MBS Thesis, Shankar Dev Campus, Kathmandu.

Lamichhane, Suraj Chandra, (2003), **Budgeting as Tool of Profit Planning of Public Utility Enterprises: A Case Study of Nepal Telecommunication Cooperation**. An Unpublished MBS Thesis, Shankar Dev Campus, Kathmandu.

Manandhar, Rabin, (2009), **Profit Planning System and Financial Conditions of Nepal Electricity Authority**. An Unpublished MBS Thesis, Shankar Dev Campus, Kathmandu.

Ojha, Khagendra Prasad (1995), **Profit Planning in Manufacturing Public Enterprises: A Case Study of Royal Drug Ltd. and Herbal Production and Processing Company Ltd**. An Unpublished Master Degree Dissertation Submitted to Central Department of Management, T.U., Kathmandu.

Rai, Mahendra (2004), **Profit Planning in Public Utilities Sector of Nepal: A Case Study of Nepal Electricity Authority**. An Unpublished MBS Thesis, Shankar Dev Campus, Kathmandu.

Rijal, Madhav (2005), **Cost volume Profit Analysis as a Toll to Measure the Effectiveness of Profit Planning and Control: A Case Study of NEBICO Pvt. Ltd**. An Unpublished MBS Thesis, Shankar Dev Campus, Kathmandu.

Sharma, Sagar (2002), **Management Accounting Practices in the listed companies of Nepal**. An Unpublished Master Degree Thesis, Shankar Dev Campus, Kathmandu.

Thakur, Gajendra Kumar (2001), **Cost Control Mechanism of Janakpur Cigrattee Factory Ltd.** An Unpublished Master Degree Thesis Submitted to Central Department of Management, T.U. Kathmandu.

Thapa, Ghan Shyam (2004), **Profit Planning in Nepalese Public Enterprises: A Case Study of Nepal Electricity Authority**. An Unpublished Master Degree Thesis, Shankar Dev Campus, Kathmandu.

**Reports:**

Munakarmi, S.P. (2002), **Cost Estimation and Allocation**, Kathmandu: Seminar Paper.

Nebico Pvt. Ltd. **Annual Report 2060-65**. Kathmandu: Balaju

Nepal Government, Ministry of Finance, (2004), **Economic Survey FY 2006/07,**Kathmandu: MOF

Nepal Government, National Planning Commission (2003), **The Tenth Plan (2002-2007),** Kathmandu: NPC.