

# CHAPTER-I

## INTRODUCTION

### 1.1 Background of the Study

Decision making is a fundamental part of management. Decision about the acquisition of equipment, mix of product, method of production, and pricing of product and services confronts manager in all types of organizations (*Hilton, 2002*)

Decision making is one of the most crucial tasks of management. Manager is constantly faced with problems of deciding what products to sell, what production methods to use, whether to make or buy component, parts what prices to charge, what channels of distribution is to use, whether to accept special orders at special prices and so forth. In decision making, cost is always a key factor. The cost of one alternatives must be compared against the cost of other alternatives as one step in the decision making process. To be successful decision making, manager must have tools at their disposal to assist them (*Bajracharya, et al, 2005*).

Every business organization has limited resources; the main problem lies in better utilization of available resources so that competitive advantages can be achieved. Among the various tools and techniques, management accounting tools have proved beneficial in every aspect of management activities from planning to decision making. Cost-Volume-Profit analysis is the most important management accounting tool of profit planning and decision making means of predicting the effects of changes in cost and sales level on the income of business. In this simplest form, it involves the determination of sales level at which a company neither earns profit nor incurs a loss, or in the other words, the point at which it breaks even. Break-even point is only a special case of CVP analysis. However, CVP analysis included to find out sales volume to earn zero profit or desire profit, to affect income by changes in selling price, to check income if new machine will be installed, to examine operating profit if fixed cost as well as unit variable cost will be changes etc.

CVP analysis is an analytical tool for studying the relationship between volume, cost and profit. There are three factors of CVP analysis which are interconnected and dependent on one another. CVP analysis examines the behavior of total revenues,

total cost and operating income as changes occur in the output level, the selling price, the variable cost per unit and fixed cost of a product. CVP also helps to make or buy decision on sub-assembly or part.

Cost volume profit analysis is a management accounting tool to show the relationship between the ingredients of profit planning. Profit planning is function of selling price of the product, the variable costs and volume to be sold. The scope of profit planning associated with CVP relationship is break-even analysis. Break even analysis is concerned with the study of revenues and costs in relation to sales at which the firm's revenue and total cost will be exactly equal (or net income is zero). Thus the break even point (BEP) may be defined a point at which the firm's total revenues are exactly equal to total costs, yielding zero income. The "no profit no loss" is a break-even point or a point at which losses cease and profit begins.

CVP analysis is a systematic method of examining the relationship between changes in activity (i.e. output) and changes in total sales revenue, expenses and net profit. As a model of these relationships CVP analysis simplifies the real world conditions that a firm will face. Like most models, which are abstractions from reality, CVP analysis is subject to a number of underlying assumptions and limitations. Nevertheless, it is a powerful tool for decision making, in certain situations (*Drury, 2000:235*).

Hence, a company may use CVP analysis, as a planning and decision making 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 the CVP analysis a company can decide the level of sales needs to reach that profit. Similarly, for the cost control purpose, CVP analysis 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 out the actual profit. It measures performance by comparing actual cost with expected cost. These expected costs are computed by applying CVP analysis to the actual sales volume. The result is a performance report on which management can base the control of operations.

Cost-volume-profit analysis applies the variable costing approach to analyze the built in relationship between cost, volume and profit. It makes use of the principles of marginal costing. The systematic relationship between cost, volume and profit is

known as CVP analysis. It is an analytical tool for analyzing the relationship among cost, price, profit, sales and production volume. It is analysis of three variables viz. cost, sales or production volume and profit which explores the relationship existing among costs, revenue, activity levels and the resulting profit. All these terms are interrelated and depended on each other. For instance, profit per unit of a product depends on its selling price and its cost. The selling price to a greater extent depends upon the cost and cost depends upon the volume of production.

A dynamic management, therefore, uses CVP analysis 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 continuous basis.

### **Profile of Kantipur Publication**

Kantipur publication private limited is one of the renowned and leading publication houses of the Nepal. It came to an existence after democratic movement of 2046 B.S. as only private daily broad sheet. The Kantipur daily and the Kathmandu post was first published in 2049, Falgun 7 in Shreya printers in Akasdeep building. In the beginning, the publication was under Goyenka but later Gyawali and Sirohiya family replaced by Kantipur publication. But Kantipur publication is under only Sirohiya family from the date of 22 srawan, 2065. From 2050 B.S. Baisakh 12, Kantipur started publishing a four page supplement Kosheli with an aim of giving purely entertainment. Since 2052/2/5, Saptahik was printed on every Friday for the full knowledge to youth consumer.

For making the publication well- organized branch offices were established at Biratnagar, Pokhara Nepalgunj and Bharatpur. The process of distribution and advertisement was well maintained through these offices. At the same time, capable and experienced journalists were kept in the regional offices for the better coverage of the regions. Since Falgun 7, 2055, it started Kantipur Journalism Awards. It also has its offices at Biratnagar from 2058 BS. Magazine sarbottam has also started publishing first, second last and last page in colored format. From eight pages, Kantipur daily is increased to the pages up to 12 from 2056/11/7. But now it is fluctuated according to time. Due to popularity of saptahik, the 16 pages were increased to 24 pages in 2055/11/7. But now it is fluctuating sometimes. publications another progress was “Nepal” a bi-monthly magazine published from 2057/4/15.

Publication's latest progress is a women focused magazine from "Sarbotam Nari" that could be found in market in Nepali medium at monthly scheme.

The basis objectives of running and business organization are to earn profits. Profits determine the financial position, liquidity and slovenly of Kantipur publication. Except profits, the main objectives and functions of the Kantipur publication are as follows.

- To provide true picture of news and present scenario.
- To provide national and international news.
- To enhance public awareness.

To provide readers a true alternative to the government press.

## **1.2 Statement of the Problem**

As long as the private sector investors do not take a leading role in the rapid socio-industrial development of the country as desired, the role of government owned enterprises becomes very important especially in terms of developing the infrastructure, extending social services and increasing industrial production. Giving the fact, more prominence and grater recognition was given in the various plans of NG to the role of government corporations. In the sector of publication, the government has liberalized the authority to private sector. There are many publications in Nepal, Gorkhapatra corporation is under government of Nepal. There are many private publications in the market of Nepal. Some of them, Kantipur publication is an important one.

Cost-volume- profit analysis provides the technique of profit planning framework based on the annual report published. Performance of Nepalese publications cannot be considered as satisfactory. Poor performance is the outcome of poor planning, controlling and decision-making. Despite the various attractive and liberal policies of the government of Nepal for Nepalese publications are not seemed satisfactory. Such conditions of established publications are not acceptable for their betterment. There may be various and different reasons for the poor performance of public corporations. Such reasons should be investigated for the corrective action for improvement in their performance.

CVP analysis provides the techniques of profit planning framework. Based on annual published annual report, performance of the Nepalese industry is not satisfactory. Poor performance is the outcomes of poor planning controlling, decision making. The question has risen whether Nepalese managers are enough competent? Do they use CVP analysis tools and technique to carryout planning, decision making and controlling function? Hence, this research is more concerned with the use of CVP analysis in profit planning process. So, this importance of CVP analysis in profitability for a firm and the problems that arises in this field has led to the selection of this topic for study. This study is basically designated to solve the following problems:

- What is the relationship between CVP and profitability of the company?
- What is the trend of sales over the period of the time?
- Which part (i.e., CM, BEP and MOS etc) of CVP analysis is mostly practice and which are not in practice till now?

### **1.3 Objectives of the Study**

The main objective of the research is to examine the relationship of cost volume and profit as an applicable tool of budgeting. Beside this, following specific objectives have been made.

- To analyze the trend of sales volume of the publication.
- To analyze the profitability position of Kantipur Publication Pvt. Ltd.
- To make suggestions and recommendations with the help of major findings.

### **1.4 Significance of the Study**

Because of the globalization, market has become very competitive. A few studies have been made in relation to the tool of CVP analysis of publications in Nepalese environment and context. Publications in Nepal deserve a crucial role for the conscious development of our country. Kantipur Publication Pvt. Ltd. is contributing the nation through large amount of tax paying, easy services to people or customer of Nepal. Study about such organization will have a crucial role. To specify it's importance, the followings points are considered.

This study provides necessary recommendation to the related department of the company. This study will be useful for potential managers, accountant, policy maker and planners. It examines the application of CVP analysis in the company. It provides information on the application of the tools under profit planning in Differences Circumstances. It will also provide the literature to the researcher, who wants to carry on further research in this field.

### **1.5 Limitations of the Study**

Each and every research has some limitations. Basically, not availability of required data and information would be the major limitations of the study. Beside this, there are few things that played an important role to limit the area of study. They are pointed out below:

- This study examines only in the area of cost-volume-profit analysis of Kantipur Publication.
- The study any related to Kantipur Publication Pvt. Ltd.
- The study is mostly based upon the secondary data.
- The study covers only five years data (FY 2063/064 to 2067/068).
- The time and the availability of resource is the main limitation of the study.

### **1.6 Organization of the Study**

The entire study has been organized into five chapters viz. introduction, review of literature, research methodology, presentation and analysis of data, and summary, conclusion & recommendations.

**The first chapter** contains the introductory part of the study. This chapter is concerned with reasons behind the selection of topic. It has included background of the study, focus of the study, statement of the problem, objectives of study, significance of the study, and limitations of study which are presented in detail.

**The second chapter** reviews the existing literature in the relevant area. Mainly, it includes review of theories and journal. Review of previous research work and research gap. The chapter does not explain in detail all the tools available, but only explains those that are used in chapter IV for analysis purpose.

**The third chapter** explains the research methodology used in the research for collection, presentation and analysis of data. This chapter deals with methodology that includes research design, sources of data, data collection techniques, method of analysis and research variable.

**The fourth chapter** presents the information gathered and interprets the data available about the concerned topic and company. For this purpose various analytical tools have been used. It also summarizes the main findings of the study.

**The fifth chapter** presents a brief summary of the whole study and points out the weaknesses and strengths of the organization. It includes summary and conclusion of the study and recommendations made to the organizations.

An extensive bibliography and appendices are included at the end. Documents and books reviewed, calculations done etc. are separated shown in appendices.

## **CHAPTER-II**

### **REVIEW OF LITERATURE**

Simply review of literature is review of all things which are related to the study and research. In other words Review of the literature is supported to revise the eminent literature relating to the study various books, articles, journals, bulletins, reports, news, paper, theses and internet etc. which are the bases for preparing it. Some philosophers, writers or researchers have given the contribution on it since many years. There are two parts in the review of literature. They are-

- Conceptual framework
- Review of related studies

#### **2.1 Conceptual Framework**

An organization is established to achieve some goals. It has its own objectives. Organization should clearly mention its objectives to achieve its goals. In this competitive globalize business age an organization whether it is public or private, profit is essential. Profit is not chance, it is result of successful management. The management of an enterprise requires continuing performance of certain managerial responsibilities. These responsibilities collectively are called the function of management. Planning, organizing, staffing and human resource management, leading and interpersonal influence and controlling are major functions of management. Planning is process of developing enterprises objectives and selecting future course of action to accomplish them. It reduces uncertainty and provides effective direction to the employee by determining the course of action in advance, controlling means evaluating the firm's activities against the plan and deciding what should be done if the plan is not being followed.

In business organization there may involve various parties like competitors, employees, trade union, government society, investment analysts, suppliers, financial institutions, managers, owners, customers etc. All these parties need to analyze the financial position of the firm before any decision made regarding the firm. Actual position of the enterprises can be found from financial statement. So, financial

statement should be analyzed to know the performance and current position of the organization. There are various tools and techniques to measure and analyze the financial performance. Cost-volume-profit analysis is one of the major and popular tools to analyze the financial statement of the firms which is the important part of profit planning and control.

### **2.1.1 Profit Planning and Control**

In these modern days, businesses except very small companies, it is virtually impossible for the top manager to have firsthand knowledge of all the relevant factors operating throughout a business. Nor can a single lower-level manager be expected to have the range of knowledge, experience and competence to make all the decisions for the large segments of a company, either as a source of reliable information or as a participant in decision-making. The quality of the judgments of the total management effort will continue to distinguish the better managed and more successful companies. Profit planning and control is the tool that is used to increase significant effectiveness of a management and to place managerial judgments, on a more objective and informed foundation.

Profit planning involves streamlining activities in order to get target profit and to secure maximum benefit from minimum effort and expenditure. A best result seems to be obtained from a single product. The planner is given the right to prove economies of the organization, the mode of operation, the determination of pricing, the marketing or any other fact of making and selling the product that affects profit acquiring from the product. The concentration of efforts upon gross traditional boundaries of the enterprises should be directed to translate needs from one group to another and to obtain consumed profit building efforts among those who can affect profits. And profits are the fundamental factors that contribute to the success of profit planning.

Profit planning is a comprehensive plan expressed in financial terms by which an operating program is effective for a given period of time. Business managers are continually involved in planning, organizing and controlling the operation of both large and small business organizations. Budgeting is one of the most important management tool used to plan and control business operations. Budgets are financial

plans prepared as a guide to plan and control business operations. A financial plan must be designed to serve as a guide for the activities. Best results are obtained when the planning period is the same as the company's fiscal year. The annual budget is broken down by months, weeks and days of operations. The budget should be designed to co-ordinate the effort of the sales department, production department and all other departments (*Bajracharya, et all, 2005: 344*).

Controlling means evaluating the firm's activities against the plan and deciding what should be done if the plan is not being followed. It is a process of ensuring that actual activities confirm to plan activities. Control helps in correction. Therefore, planning and controlling are the major functions of management (*Lynch & Williamson, 1999: 112*).

Koontz and O'Donnel have given emphasis on planning and control function of management. The role of management on profit planning and control has been defined and the assumption that management can plan and control long term destiny of an organization through perfect decision making process. In favor of planning and control, economist and the management experts have said that planning means prosperity and unplanned means happenstance. So, a modern management expert has given more importance to profit planning and control. Profit planning and control has been regarded importance to profit planning and control. Profit planning and control has been regarded as a basis for perfect decision-making. Profit planning and control, also known as comprehensive profit planning and control, is a new term in the literature of business. Though it is a new term but it is not a new concept in the management. Comprehensive profit planning and control or PPC on other terms are business budgeting, managerial budgeting and budgeting. It is an integral part of management.

Profit plan is a financial and narrative expression of the expected results from the planning decisions. It is called the profit plan (or the budget) because it explicitly states the goals in terms of time expectations and expected financial results (return on investment, profit, and cost) for each major segments of the entity. Typical profit plans establish the content and format of the internal-control reports with respect to operations, inputs, outputs and financial position developed by the entity for monthly performance reporting to the various levels of management (*Welsch, et all, 2000:34*).

In comprehensive sense, we can say that PPC is one of the most important approaches that have been developed to facilitate effective performance of the management process.

#### **2.1.1.1 Principle & Purpose of PPC**

The main principle and purpose of profit planning are as follows:

- To provide a realistic estimate of income and expenses for a period and the financial position at the close of the period detailed by areas of management responsibility.
- To provide a co-ordinate plan of action which is designed to
- Activate the estimates reflected in the budget.
- To provide a comparison of actual results with those budgeted and an analysis and interpretation on deviation on by the responsible heads to indicate course of corrective action and to make improvements in procedures in preparing future plan.
- To provide a guide for management decision in adjusting plans and objectives as the change in uncontrollable condition.
- To provide a basis for making forecasts during the budget period and to guide management to make day-to-day decisions (*Welsch, et all, 2000:255*).

#### **2.1.1.2 Importance & Advantages of PPC**

A profit planning is financial narrative expression of the expected results from the planning decision. It is called the profit plan or budget because it states the goals in terms of time expectations and expected financial result for each major segment of entity. Many benefits are derived from budgeting although it is a means not as end in itself. PPC is a feed forward process. It involves the evaluation of the variables likely to affect future operations of the enterprises. It predicts future with reasonable precision and removes uncertainty to a great extent.

The main advantages or importance of comprehensive profit planning and control are as follows:

- PPC focuses basic policies to initiatives.
- It sets responsibilities of employees in relation to each function.
- It creates the feeling of co-operation and understanding between different departments of enterprises.
- It leads to maximize and most economical utilization of material, labor, capital and other sources with a view to ensure maximum return.
- It forces the management to keep adequate and correct historical data in the business.
- In competed management to plan future, the budgeting process forces management to look a need and become more effective and efficient administration in the business operations.
- It forces the management to take necessary steps for getting satisfactory results.
- It improves the quality of communication. The organizational objectives, goals, plans, authority and responsibility and procedures to implement plans are clearly written, so it is very easy to communicate budget to all individuals in the enterprise. This results better understanding and harmonious relationship among top-level managers and their sub-ordinates.
- It develops the atmosphere of profit and cost consciousness in the mind of employees.
- It highlights upon the lack of efficiency in the business if any and thus helps the management to take remedial action immediately.
- Profit planning necessitates a periodical and critical appraisal of every elements of a business.
- It tends to remove the cloud of uncertainty that exists in many firms especially among lower levels of management related to basic policies and objectives of enterprises.

### **2.1.1.3 Basic Assumption & Limitation of PPC**

There are so many assumptions for using profit-planning programs. Firstly, it is required to measure the basic plan in terms of money. Secondly, there should be good

co-ordination in every aspects of the business for the optimum profit goals and thirdly, profit gives guidelines about what to do? It is happened as forecast but it also gives guidelines of things work out differently from the forecast. The limitations of PPC are as under:

- The profit plan is based on estimates. The success of profit planning and control depends to a large degree on the accuracy with which the basic estimate will be made.
- PPC is an estimation and quantitative expression of all relevant data. So, there can be the tendency to attach some sort of rigidity or finality to them.
- The installation of a complete PPC is not possible in a short period. It should be continuously used in the business, and should be revised and modified with the changed situation in the business.
- Execution of a profit plan will not occur automatically. So, as skillfully prepared PPC will not itself improve the management of an enterprise, unless it is properly implemented.
- PPC is a tool. It is not a substitute for the management.
- The installation of a PPC system is an elaborated process involving too much time and costs.
- Unrealistic targets should not be set and used as a pressure tactic. By doing it. PPC will lower morale and productivity.
- In the absence of proper evaluation, PPC will hide inefficiencies. So, there should be continuous evaluation of the actual performances. Standards also should be re-examined regularly.

#### **2.1.1.4 Application of PPC to Various Types of Organization**

Some people say that comprehensive profit planning and control is applicable only to large and complex organizations. Comments like "comprehensive budgeting is a fine idea for most businesses, but ours is different," or "it is impossible to project our revenues and expenses," and so on. Such types of comments are common regarding non-manufacturing enterprises, service organizations, financial institutions, hospitals, certain retail business, construction companies, and real estate enterprises. On the

contrary, profit planning and control can be adapted to any organization (profit or non-profit, service or manufacturing), regardless of size, special circumstances, or conditions. The fact that a company has peculiar circumstances or critical problems is frequently a good reason for the adoption of certain profit planning and control procedures. In respect to size, when operations are extensive enough to require more than one or two supervisory personnel, there is a need of profit planning and control applications. The smallest company certainly has different needs in this respect than a large one. As with accounting, a single profit planning and control system that is appropriate for all enterprise cannot be designed. A profit planning and control system must be tailored to fit the particular enterprise, and it must be continually adapted as the enterprise and its environment change.

#### **2.1.1.5 Different Tools to Measure the Effectiveness of PPC**

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

#### **2.1.1.6 CVP Analysis as a Tool of PPC**

Out of various profit planning tools, CVP analysis is the most important tool. It provides the information about the behavior of cost in relation to volume, volume of production or sales where the business will break-even point, sensitivity of profit due to variance of output, amount of profit for a projected sales volume and quantity of production and quality of production and sales for the target profit level etc. Therefore CVP analysis may be defined as a managerial tool showing the relationship between various ingredients of profit planning. CVP analysis is an important media through which the management can have an insight into effects on profit on account of variance in cost and sales and take appropriate decisions. CVP analysis is great helpful in managerial decision-making. Especially cost control and profit planning is

possible with the help of CVP analysis. Profit planning can be done only when the management has the information about the cost of product and selling price of the product.

### 2.1.2 Cost-Volume-Profit Analysis

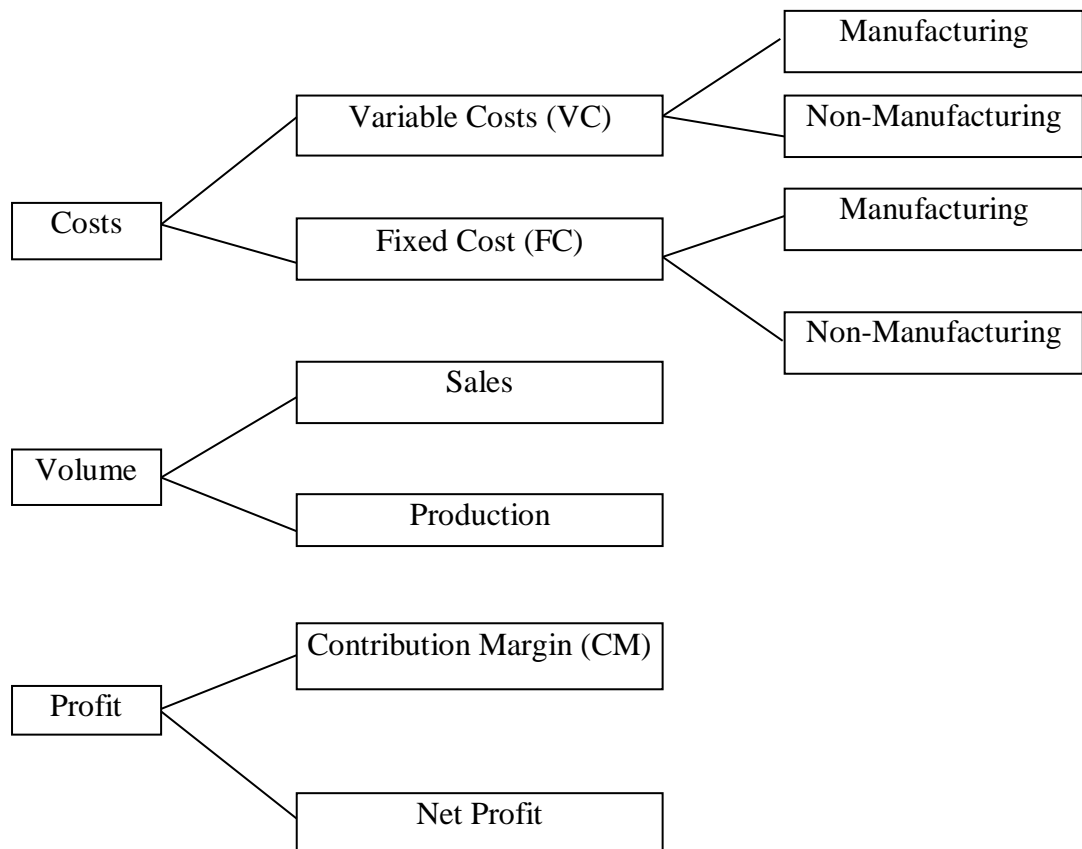
There are three words viz. cost volume and profit.

In general, cost is the amount of expenditure (actual or notional) incurred on or attributable to a given thing. Cost as a verb can be the process of ascertaining the total amount of money that needs to be spent by a business. It is the key players of every management decision.

In general **volume** is the level of production or scale of production or level of output.

And **profit** is the money that is made in business or by selling things, especially after paying the costs involved. It is the premium for the producers for the act of producing the given products. In other words it's the incentive to the producers.

**Figure No. 2.1: Classification of Cost, Volume & Profit**



Cost volume profit analysis is the process of examining the relationships among revenues cost and profits for a relevant range of an activity and a particular time frame. It is one of the most important and powerful tools that managers have at their command in short term planning. It helps managers to understand inter relationship between cost, volume and profit in an organization.

Cost-volume-profit (CVP) analysis examines the behavior of total revenues, total costs, and operating income as changes occur in the output level, the selling price, the variable cost per unit, and/or the fixed costs of a product (*Hornngren et all, 2003*).

Cost-volume-profit analysis is a systematic method of examining the relationship between changes in activity (i.e. output) and changes in total sales revenue, expenses and net profit. As a model of these relationships CVP analysis simplifies the real-world conditions that a firm will face. Like most models, which are abstractions from reality, CVP analysis is subject to a number of underlying assumptions and limitations, nevertheless, it is powerful tool for decision making in certain situations (*Drury, 2000: 112*).

CVP analysis is the analysis of three variables cost, volume and profit. Such an analysis explores the relationship existing amongst cost, revenue, activity levels and the resulting profit. It aims at measuring variances of cost with volume. On the profit planning of a business, cost volume profit relationship is the most significant factor. The CVP analysis is an extension of marginal costing. It makes use of principle of marginal costing. It is an important tool of planning. It is quite useful in making short-run decision (*The Institute of Chartered Accountants of India. 2004: 216*)

Most of the business fails after a few years, sometimes months, of starting because they tend to do anything for volume without thinking how it's going to affect the bottom line. Cost-volume-profit analysis is a management accounting tool to show the relationship between the elements of profit planning. Profit planning is the function of the selling price of product, demand, variable costs, fixed costs, taxes, etc. The whole picture of profit planning is associated with cost-volume-profit interrelationships (*Bajracharya, et. all, 2005: 225*).

The key motive of business enterprises is to make and maximize profit. Profit does not happen by chance. It is to be managed. Cost-volume-profit analysis is a

supplementary tool of planning for profit. CVP is immensely helpful for developing alternative strategies in sales planning and cost estimation. CVP analysis is an accounting technique showing the relationship between variables.

#### **2.1.2.1 Cost-Volume-Profit Relationship**

It is the analysis of three variables viz. cost, volume and profit, which explores the relationship existing amongst costs, revenue, activity levels and the resulting profit. Profit, as a variable, is the reflection of a number of internal and external conditions, which exert their influence on sales revenue and costs. Revenue depends upon selling prices, costs, volume of sales, demand, competition, etc. Although none of these can be singled out as the most important, the volume is considered to be a dominant factor. This is probably because changes in volume is more frequent, takes place rapidly and is outside the purview of management control. Further costs rarely vary in direct proportionate effect on profits than the other factors outlined above. It is thus, the volume which is perhaps the largest single factor which influences costs. As such, an intimate relationship exists amongst costs, volume and profit. The cost-volume-profit analysis is an extension of marginal costing. It makes use of the principles of marginal costing. It is an important tool of short term planning and is more relevant where the proposed changes in the level of activity are relatively small. It is useful in making short-run decisions.

#### **2.1.2.2 Importance & Use of CVP Analysis**

Planning, controlling and the decision-making are the essential managerial functions. Cost-volume-profit analysis helps the managers to plan for profit; to control cost and make decision as such it helps to:

- To determine the break-even point in terms of unit or sales value.
- To determine the margin of safety.
- To estimate profits or losses at various level of output.
- To help management to find the most profitable combination of costs and volume.
- To assess the likely effects of management decisions such as increase or decrease in selling price, adoption of new method of production to reduce

direct labor and increase output.

- To determine the optimum selling price.
- To determine, the sales volume at which the profit goal of the firm will be achieved.
- To determine the most profitable and least profitable product.
- To determine new BEP for changes in fixed or variable cost.

### **2.1.2.3 Assumption & Limitation of CVP Analysis**

CVP analysis is a vital technique that provides supplementary information for profit planning. Every business starts with the target O break-even and then it aims to earn profit over its life. But the business firm passes through many ups and downs. CVP analysis helps to plan for every set of goals in the short-run. But the CVP analysis encompasses the following assumptions and limitations:

- All costs can be classified into fixed and variable components.
- The behavior of variable cost should be linear.
- Fixed costs will be remained the same in the short-run up to maximum level of output or entire range of output.
- Selling price should be constant for any volume of output in the short-run.
- Planned selling price and actual selling price are homogeneous.
- There is no effect of the size of inventory on net income.
- CVP analysis is a short-term planning tool.
- The ratio of each product on total sales will be in accordance with a predetermined sales mix either a single product is sold or more products are sold.
- Cost of raw material, wage rate, methods of production design of the product will not be changed as well as any change in productivity and efficiency.

### **2.1.2.4 Application of CVP Analysis**

Business organization is established to earn a profit. Planning is the fundamental part of the overall management function. Profit planning can be done only when the

management has the information about the cost of product, variable cost, fixed cost and selling price of the product. Profit of a business organization is affected by selling price of the product, volume of sales, unit variable cost, fixed cost and sales mix. The most important factor that affects the planning for profit is cost and volume of sales. The cost-volume-profit relationship will be established by break-even analysis. Cost-volume-profit analysis is applied especially for:

- It helps in profit planning and cost controlling process.
- It also assists the management in understanding the behaviors of cost and helps in budgeting control.
- It helps to fix selling price to meet the desired profit.
- It helps to determine the level of output where all the costs can be met with revenue i.e. break-even point.
- It helps to determine the required sales volume to meet the desired profit.
- It assesses the business risk associated with enterprises thorough margin of safety analysis.
- It assesses the business risk in different cost structures.
- It assesses the impacts of the changes in cost-volume-profit variables (Sensitivity Analysis).
- It helps to make managerial decisions regarding the alternative choices such as make or buy a part, drop or continue a department/product line, accept or reject a special order, selection of profitable product mix etc.
- It helps to determine the optimum sales-mix in multi-product firm.
- It also deals with the optimum allocation of constraint resources to different product lines.

#### **2.1.2.5 Contribution Margin Analysis**

Contribution margin is the excess of sales revenue over variable cost. So, contribution margin means how much is left from sales revenue, after covering variable expenses that are contributed toward the covering of fixed expenses and then toward profit for the period. Contribution margin is used first to cover the fixed expenses, and then whatever remains, after the fixed expenses are covered, goes toward profit. If the

contribution margin is not sufficient to cover the fixed expenses, then a loss occurs for the period. Basically, contribution margin indicates why operating income changes as the volume of sales changes. It can be expressed as:

1. Contribution Margin (CM) = Sales Revenue (SR) - Variable Cost (VC).
2. Contribution Margin (CM) = Fixed Cost (SR) ± Profit/Loss.
3. Contribution Margin per Unit (CMPU) = SPPU - VCPU
4. Contribution Margin per Unit (CMPU) =  $\frac{\text{Change in Profit}}{\text{Change in Sales (Units)}} = \frac{\Delta \text{Profit}}{\Delta \text{Sales (Units)}}$
5. Contribution Margin per Unit (CMPU) =  $\frac{\text{Net Profit before Tax (NPBT)}}{\text{Margin of Safety (Units)}}$
6. Contribution Margin Ratio (C/M Ratio) =  $\frac{\text{Contribution Margin (CM)}}{\text{Sales Revenue (SR)}}$  or,  $\frac{\text{CMPU}}{\text{SPPU}}$
7. Contribution Margin Ratio (C/M Ratio) =  $\frac{\text{Change in Profit}}{\text{Change in Sales (Rs)}} = \frac{\Delta \text{Profit}}{\Delta \text{Sales (Rs)}}$
8. Contribution Margin Ratio (C/M Ratio) =  $\frac{\text{Net Profit before Tax (NPBT)}}{\text{Margin of Safety (Rs)}}$

#### 2.1.2.6 Break-even Analysis

Break-even analysis uses the same concepts as contribution analysis. However, it emphasizes the level of output or productive activity at which sales revenue exactly total costs that is there is no profit or loss. Break-even analysis rests upon the foundation of cost variability, separate identification and measurement of the fixed and variable components of cost. It is usually applied on a "total company" basis (Saksena, 1995: 112).

The break-even point is that point where total revenue equals total costs incurred. There is neither a profit nor a loss at the BEP. Although management typically plans for a profit each period, the break-even point should be concerned. If sales fall below the BEP, losses are incurred. Management must determine the break-even point in

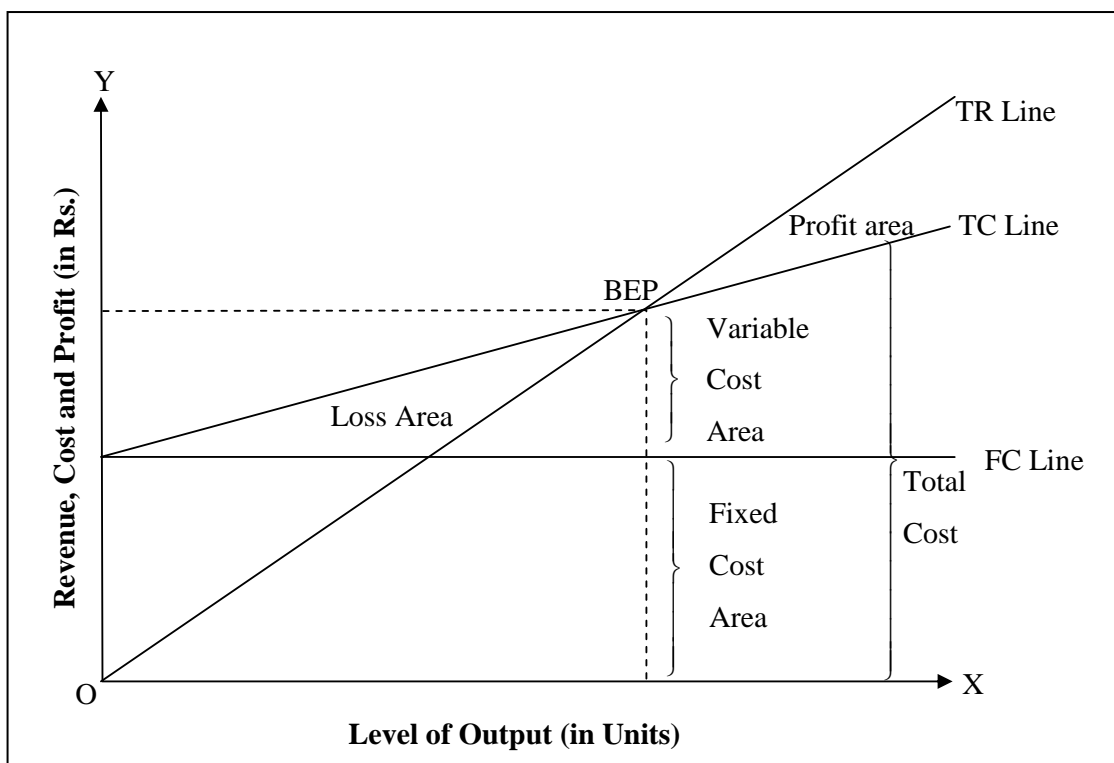
order to compute the margin of safety. Management can quickly measure the likelihood success of new ventures or product lines by finding its BEP.

### Approaches to Break-even Analysis:

#### 1. The Graphical Approach

The BEP can be computed graphically. A break-even chart portrays a pictorial view of the relationship between costs, volume and profit. The indicated BEP in the chart will be one at which total cost line and total sales line intersect with each other.

**Figure No. 2.2: Graphical Approach of BEP**



#### 2) Algebraic Equation Approach

The most popularly practiced approach to the break-even point and cost-volume-profit analysis is the formula, also known as the equation. The formula approach uses an algebraic equation to calculate the break-even point. The answers provided by solving the equation may, sometimes, need to be rounded to whole numbers of units or lot sizes. The rounding of break-even point is always done upward because this will provide a small profit rather than the small loss that would be shown from rounding downward (*Rainborn, et all, 1993: 89*).

**Table No. 2.1: Contribution Margin Income Statement**

Particulars	Symbol For Equation
Sales Volume (Units)	Q
Selling Price per Unit	SPPU
Sales Revenue (Rs)	$Q \times SPPU$
Less: Variable Costs	$Q \times VCPU$
Contribution Margin	$Q \times SPPU - Q \times VCPU$
Less: Fixed Costs	FC
Net Profit	$Q \times SPPU - Q \times VCPU - FC$

$\therefore$  Sales Revenue (SR) - Total Cost (TC) = Profit/Loss

Or,  $SR - (FC + VC) = \text{Profit/Loss}$

Or,  $SPPU \times Q - (FC + VCPU \times Q) = \text{Profit/Loss}$

Or,  $SPPU \times Q - VCPU \times Q - FC = 0$  [Profit/Loss = 0]

Or,  $Q (SPPU - VCPU) = FC$

Or,  $Q = \frac{FC}{SPPU - VCPU} = \frac{FC}{CMPU}$

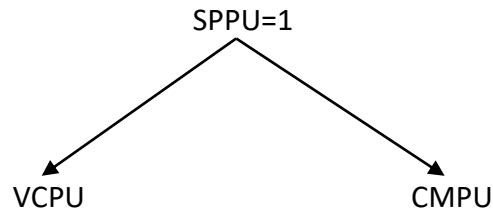
$\therefore$  BEP (Units) =  $\frac{FC}{CMPU}$  and  $BEP(Rs) = \frac{FC}{C/M \text{ Ratio}}$

### 3) Contribution Margin Income Statement Approach

The contribution margin income statement approach to CVP analysis allows the preparation of pro forma (projected) statement from the available information. BEP and Other required CVP relationships can be explained through a contribution margin statement. A contribution margin statement is the variable costing income statement whose philosophy is all fixed costs are period costs that should be deducted from the contribution margin of the same period. Only the variable costs vary proportionality to the level of outputs or sales.

Sales Revenue (Rs)	XXX → BEP (Rs)
Less: Variable Costs	<u>XXX</u>
Contribution Margin	XXX
Less: Fixed Costs	<u>XXX</u>
Profit	<u>Nil</u>

Then,



$$\therefore \text{V/C Ratio} = \frac{VCPU}{SPPU} \quad \text{C/M Ratio} = \frac{CMPU}{SPPU}$$

Now,

$$\therefore \text{Sales Revenue (SR)} = \text{Total Costs (TC)} \pm \text{Profit/Loss}$$

$$\text{Or, SR} = (\text{FC} + \text{VC}) \pm \text{Profit/Loss}$$

$$\text{Or, SR} = \text{FC} + \text{SR} \times \text{V/C Ratio} \pm \text{Profit/Los}$$

$$\text{Or, SR} - \text{SR} \times \text{V/C Ratio} = \text{FC} \pm \text{Profit/Los}$$

$$\text{Or, SR} (1 - \text{V/C Ratio}) = \text{FC} \pm 0 \quad [\text{Profit/Loss} = 0]$$

$$\text{Or, SR} = \frac{FC}{1 - \text{V/C Ratio}}$$

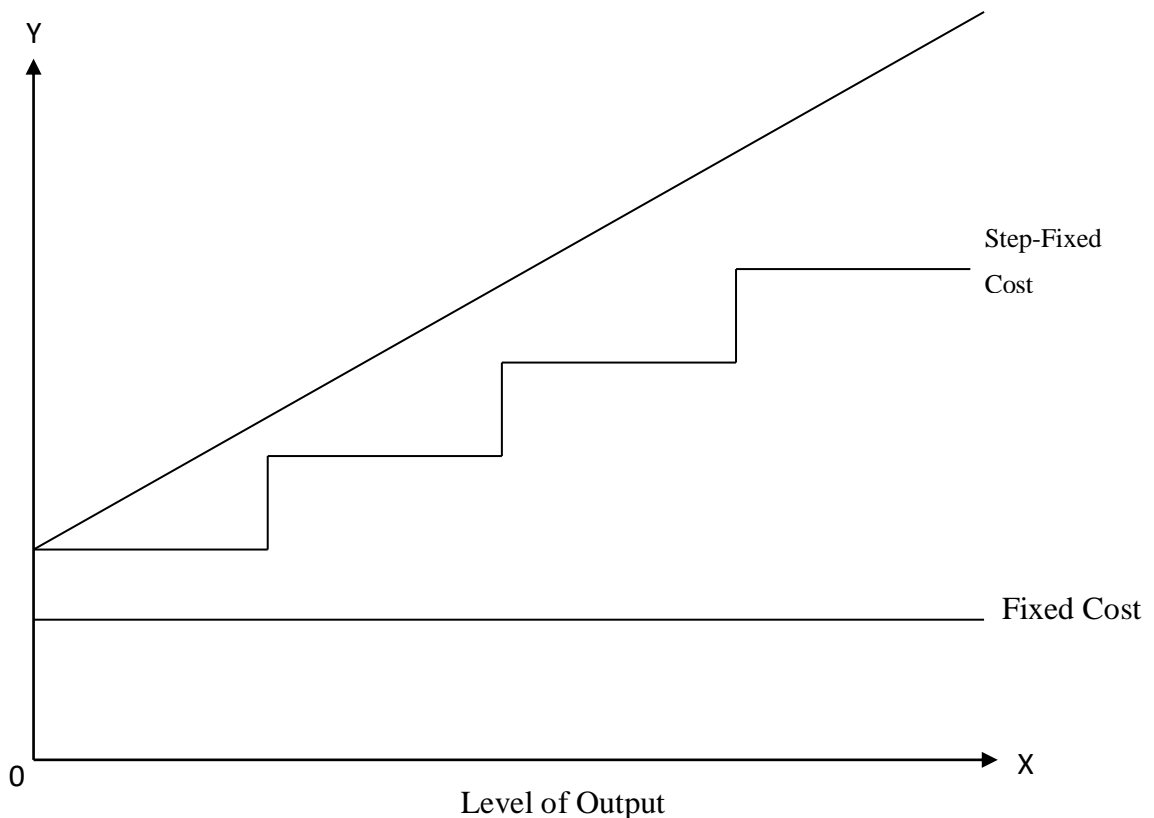
$$\text{Or, SR} = \frac{FC}{\text{C/M Ratio}}$$

$$\therefore \text{BEP (Rs)} = \frac{FC}{\text{C/M Ratio}} \quad \& \quad \text{BEP (Units)} = \frac{FC}{\text{CMPU}}$$

## Step Fixed Costs & BEP Analysis

Step fixed costs are those which neither remain the same for all levels of output nor change proportionately. Step fixed costs jump if the level of activity exceeds a certain level. So, these costs are unknown before estimating the required level of sales. Step fixed costs are to be critically estimated at the problem. It is particularly because these are unknown previously for the required level of activity.

**Figure No. 2.3: Step Fixed Costs**



BEP is calculated through the following steps:

**Step 1:** Assume all step fixed as variable for some time.

**Step 2:** Find out assumed CMPU.

**Step 3:** Find out BE range.

**Step 4:** Estimate total fixed cost for BE range.

**Step 5:** Determine actual BE sales volume according to determined fixed cost.

**Step 6:** If this calculated BEP doesn't satisfy step fixed cost, then again determine fixed cost according to this BEP unit.

## **BEP Analysis with LIFO-FIFO Consideration**

### **1) If the Company uses FIFO Method**

$$\therefore \text{BEP (Units)} = \text{Beginning Inventory} + \frac{FC - CM \text{ of Beginning Inventory}}{CMPU \text{ of This Year}}$$

$$\therefore \text{BEP (Rs)} = \text{Beginning Inventory} \times \text{SPPU} + \frac{FC - CM \text{ of Beginning Inventory}}{C / M \text{ Ratio of This Year}}$$

### **2) If the Company uses LIFO Method**

$$\therefore \text{BEP (Units)} = \text{Production Units} + \frac{FC - CM \text{ of Beginning Inventory}}{CMPU \text{ of This Year}}$$

$$\therefore \text{BEP (Rs)} = \text{Production Units} \times \text{SPPU} + \frac{FC - CM \text{ of Beginning Inventory}}{C / M \text{ Ratio of This Year}}$$

## **BEP Analysis with Non-Operating Income & Expense Consideration**

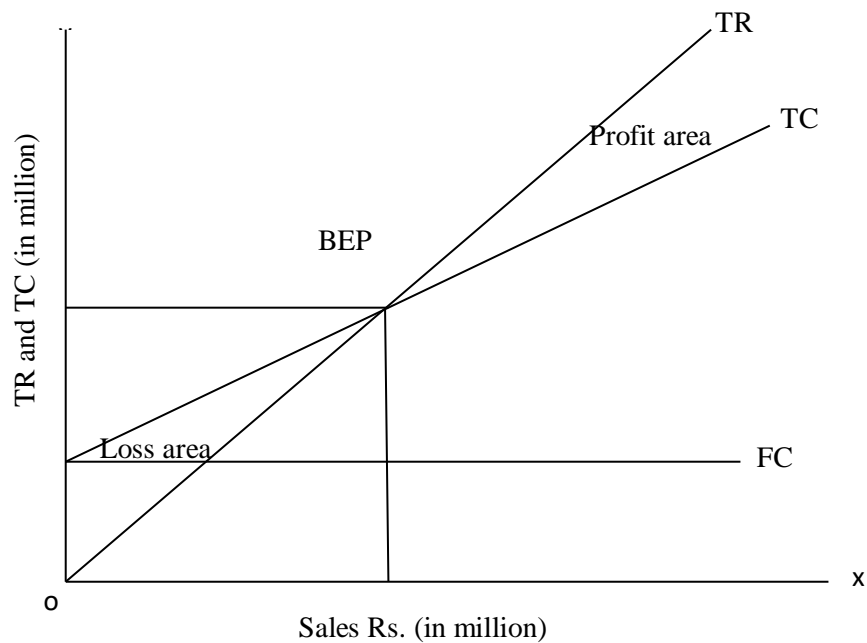
$$\therefore \text{BEP (Units)} = \frac{FC - \text{Non-Operating Income} + \text{Non-Operating Expenses}}{CMPU}$$

$$\therefore \text{BEP (Rs)} = \frac{FC - \text{Non-Operating Income} + \text{Non-Operating Expenses}}{C / M \text{ Ratio}}$$

### **2.1.2.7 Economic Characteristics of CVP Analysis**

Where costs are reasonably accurate, they can help management in decision-making. Essentially, cost-volume-profit analysis offers greater insight into the economic characteristics of a company and may be used to determine the approximate effect of various alternatives. CVP analysis is based on estimates; however, the arithmetical manipulations generally involve averages, and hence the results should never be interpreted as precise. Rather, the analysis may be characterized approximately as a 'slide-rule' approach that may be used to develop a test with a minimum of effort and the approximate effect on cost and profit of several types of management decisions (*Welsch et al, 1979: 467-468*).

**Figure No. 2.4: Break-Even Chart**



Above break-even chart with economic characteristic indicates few of the economic characteristics of a business, "which are:

- Fixed cost, variable costs and total costs at varying volumes.
- The profit and loss potential before and after income taxes at varying volumes.
- The margin of safety is the relationship of budget volume to break even volume.
- The preferred dividend or danger point below which preferred dividends are not earned.
- The dead point, the point where management earns only the "going" rate in the investment.
- The common dividend or unhealthy points below earnings are insufficient to pay the preferred dividends and the expected dividend on the common stock. (Welsch, et al, 1979: 468)

All these points and as other can be completed if data are developed for cost volume profit purposes.

### 2.1.2.8 Required Sales for Desired Profit

Desired profit of the firm may be the 'Profit before Tax', Profit after Tax', '% of Profit on Sales Revenue', '% of Profit on Investment Amount' etc.

1. If the company wants to earn certain amount of profit before tax:

$$\text{Required Sales (Units)} = \frac{FC + DPBT}{CMPU}$$

$$\text{Required Sales (Rs)} = \frac{FC + DPBT}{C/M \text{ Ratio}}$$

2. If the company wants to earn certain amount of profit after tax:

$$\text{Required Sales (Units)} = \frac{FC + \left[ \frac{DPAT}{1 - Tax} \right]}{CMPU}$$

$$\text{Required Sales (Rs)} = \frac{FC + \left[ \frac{DPAT}{1 - Tax} \right]}{C/M \text{ Ratio}}$$

3. If the co. wants to earn certain % of profit before tax on sales revenue:

$$\text{Required Sales (Units)} = \frac{FC}{CMPU - PPU}$$

$$\text{Required Sales (Rs)} = \frac{FC}{C/M \text{ ratio} - \text{Profit Ratio}}$$

4. If the co. wants to earn certain % of profit after tax on sales revenue:

$$\text{Required Sales (Units)} = \frac{FC}{CMPU - \left[ \frac{PPU}{1 - Tax} \right]}$$

$$\text{Required Sales (Rs)} = \frac{FC}{C/M - \left[ \frac{\text{Profit Ratio}}{1 - Tax} \right]}$$

5. If the co. wants to earn certain % of profit after tax on sales revenue:

$$\text{Required Sales (Units)} = \frac{FC + Investment \times ROI}{CMPU}$$

$$\text{Required Sales (Rs)} = \frac{FC + Investment \times ROI}{C / M \text{ Ratio}}$$

### 2.1.2.9 The Margin of Safety

Margin of safety is the excess of budgeted (or actual) sales over the break-even volume of sales. It is the difference between the BEP and actual sales revenue. It is a position above the BEP. It states the amount by which sales can drop before losses begin to be incurred. It gives management a feel for how does projected operations are to be organization's BEP. Manager often considers the size of the company's margin of safety for making any decisions regarding about various business opportunities. Margin of safety is the amount that sales can drop before reaching the break-even point and thus provides certain amount of 'cushion' from losses. The margin of safety can be expressed in units, value or a percentage (*Munankarmi, 2003: 405*).

$$\therefore \text{Margin of Safety} = \text{Total Sales} - \text{BE Sales}$$

$$\text{Or, Margin of Safety} = \frac{FC + Profit}{CMPU} - \frac{FC}{CMPU}$$

$$\text{Or, Margin of Safety} = \frac{1}{CMPU} (FC + Profit - FC)$$

$$\text{Or, Margin of Safety} = \frac{Profit}{CMPU}$$

$$\therefore \text{Margin of Safety (Units)} = \frac{Profit}{CMPU} \quad \& \quad \text{Margin of Safety (Rs)} = \frac{Profit}{C / M \text{ Ratio}}$$

$$\text{Margin of Safety Ratio} = \frac{\text{Margin Saety}}{\text{Total Sales}} = 1 - \frac{\text{BE Sales}}{\text{Total Sales}}$$

### 2.1.2.10 Sensitivity Analysis

Sensitivity analysis is the measurement of elasticity of the change in cost-volume-profit factors on break-even point or given profit. The strategist should focus more on the factor, which is more sensitive or responsive for profit. To measure the

sensitivity of cost-volume-profit factors, one can see the impact of certain percentage or amount change in volume, price or cost factors on net profit. In other words, sensitivity analysis is the measurement of responsiveness in outcome with the changes in determinant variables. We know that the goal of business enterprise is to maximize profit. Profit is the excess of revenues over the total costs.

$$\therefore \text{Net Profit} = \text{Total Sales Revenue} - \text{Total Costs} - \text{Taxes}$$

$$\text{Or, Net Profit} = \text{Total Sales Revenue} - (\text{Fixed Cost} + \text{Variable Cost}) - \text{Taxes}$$

$$\text{Or, Net Profit} = \text{Total Sales Revenue} - (\text{Fixed Cost} + \text{Variable Cost}) - \text{Taxes}$$

$$\text{Or, Net Profit} = \text{Sales Units} \times \text{SPPU} - (\text{Fixed Cost} + \text{Sales Units} \times \text{VCPU}) - \text{Taxes}$$

So that, Profit = f {Sales Volume, Selling Price, VC, FC, Taxes, etc.}

Means, profit is the function of volume, price, VC, FC, Taxes & so on.

**Effect of Price Change:** Other things remaining the same, an increase in selling price will result an increase in contribution margin and P/V ratio. It results the decrease in BEP & increase in profit. On the contrary, a reduction in the selling price will result in decrease in CM and thus P/V ratio.

**Effect of Volume Change:** A change in volume, no accompanied with a change in the selling price and the costs, will not affect P/V ratio. As a result the BEP remains unchanged. Profit will increase with an increase in volume and will be reduced with a decrease in volume.

**Effect of Variable Cost Change:** An increase in variable cost will result the decrease in contribution margin and then P/V ratio will also decrease. It results the increase in BEP & decrease in profit.

**Effect of Fixed Cost Change:** Any change in fixed cost will not affect the contribution margin. Therefore, the P/V ratio will not change. A fall in fixed cost will however reduce BEP but raise profit. Similarly, increase in fixed cost will reduce profit but raise BEP.

### 2.1.2.11 Risk Measurement: Operating Leverage & BEP

Operating leverage tells us how profit change with the change in sales. It is evident that profit changes more rapidly than sales. Why do profit change more rapidly than the sales? It is because some costs do not change. Say, if sales decline, variable costs also decline in the same ratio so that contribution margin also declines proportionately. But fixed costs do not decline. So the net operating income declines more rapidly. The same thing applies in the case of increase as well as Sales revenues changes, but some part of costs, known as fixed costs, remain unchanged. That is why net operating income changes more rapidly. This change is called the operating leverage.

Operating leverage can be measured in terms of the “*Degree of Operating Leverage*” (DOL). A degree in operating leverage shows the times of percentage change in net operating income of the given percentage change in sales. Degree in operating leverage may be defined as the percentage change in net operating income (NOI) or EBIT associated with a given percentage change in sales (*Pandey, et all, 2004*).

$$\text{DOL} = \frac{\% \text{ Change in Operating Income or EBIT}}{\% \text{ Change in Sales}} = \frac{\Delta \text{EBIT} / \text{EBIT}}{\Delta \text{Sales} / \text{Sales}}$$

Alternatively;

$$\therefore \text{DOL} = \frac{\text{Contribution Margin (CM)}}{\text{Net Operating Income (EBIT)}}$$

$$\text{Or, DOL} = \frac{Q(SPPU - VCPU)}{Q(SPPU - VCPU) - FC}$$

As we know;

$$\therefore \text{BEP} = \frac{FC}{SPPU - VCPU}$$

**DOL & BEP Relationship:** Leverage decision is meant to substitute variable costs by the fixed costs. To create a degree of operating leverage means the employment of higher amount of fixed costs, which eventually increases the break-even point also. Higher fixed costs increase the DOL and they increase the BEP. BEP will be '0' when DOL becomes T. Increase in DOL results the increase in BEP & decrease in DOL results the decrease in BEP.

**Decision:** A high DOL & a high BEP both are the indicators of higher risk. A decision to select a DOL depends upon the future likelihood. If the future is likely to be favorable, then it is better to choose high fixed cost alternative that is high DOL since a high DOL firm goes into loss sooner as sales decline and earns more as sales increase. If it is likely to be unfavorable, then it is safe to operate with a small or no amount of fixed costs that is less DOL. Secondly, the selection of a DOL is sometimes subjective. A risk taker may prefer a high DOL but a risk averter prefers a small DOL.

#### **2.1.2.12 CVP Analysis for Multi-Product Firms**

Sales mix can be defined as the relative combination of two or more products represented in total. It is not only the sales revenue that makes profit. The proportion the sales contributed by different products greatly changes the amount of profit. Managers try to achieve that combination, or mix, that will yield the greatest amount of profit. If a company sells more than one product, these may not be equally profitable. So the company's profit will depend upon the ratio of each product's sales to total sales revenues. Profit will be greater if high margin items make up a relatively large proportion of total sales than if sales consist mostly of low margin items. Changes in sales mix can cause great variations in a company's profit. A shift to low-margin items can cause the total profit to decrease even through total sales increase. On the contrary, a shift in the sales mix from low-margin items to high margin items can cause the reverse effect-total profit may increase even through total sales decrease.

#### **Factors to be considered:**

- Product wise Selling Price.
- Product wise Variable Cost.
- Fixed Cost: (a) Product wise FC / Departmental FC  
(b) Jointed FC / Allocated FC
- Sales Volume / Sales Mix: (a) Insignificant Mix  
(b) Significant Mix:
  - (i) Sales Unit Mix

(ii) Sales Revenue Mix

Then, BEP & Required sales can be calculated as:

1. If Sales Mix is Insignificant:

$$\text{Overall BEP} = \text{Sum of Individual Product BEP} = \text{BEP}_A + \text{BEP}_B$$

2. If Sales Mix is Signified:

$$\text{Overall BEP (Units)} = \frac{\text{Total FC}}{\text{Weighted CMPU}}$$

$$\text{Overall BEP (Rs)} = \frac{\text{Total FC}}{\text{Weighted C/M Ratio}}$$

Where, Total FC = Departmental FC + Joint FC

$$\text{Weighted CMPU} = W(\text{Unit})_A \times \text{CMPU}_A + W(\text{Unit})_B \times \text{CMPU}_B$$

$$\text{Weighted CMPU} = \frac{\text{Total CM}}{\text{Total Sales (Units)}} = \frac{\text{CM}_A + \text{CM}_B}{Q_A + Q_B}$$

$$\text{Weighted C/M Ratio} = W(\text{Rs})_A \times \text{C/M Ratio}_A + W(\text{Rs})_B \times \text{C/M Ratio}$$

$$\text{Weighted C/M Ratio} = \frac{\text{Total CM}}{\text{Total Sales (Rs)}} = \frac{\text{CM}_A + \text{CM}_B}{\text{SR}_A + \text{SR}_B}$$

### 2.1.2.13 CVP Analysis under Condition of Uncertainty

CVP analysis can be used for various purposes such as between machine and products, planning of profit and cost significant fixing up of selling price. Management uses this as a convenient tool of profit planning with giving consideration of risk and uncertainty involved in it.

Although, margin of safety ratio explains the degree of sensitivity of the project and product in general but it fails to explain certainty in the product and also between the alternatives. To overcome such a difficulty, risk and uncertainty analysis like in any other management decision making can also be used in CVP analysis. The objective in CVP analysis under condition of uncertainty is to assess the probability distribution of the profit volume under given distribution of one or more factors like sales, price, or profits.

Probability distribution approach is a simple statistical tool which may be used to measure the risk and uncertainty involved In CVP analysis. A probability distribution

theory normally suggests for postulation of various possibility of happening the event in consideration. This may be done either taking into considerations of the experience in the past or may be done by considering the personal intuition of the persons doing so. In business, reference of past experience is hardly available not a person is likely to behave in the same manner in the similar situation in different time. Therefore, personal judgments plays significant role in the managerial decision making. The conditions thus postulated are assigned probability (i.e. ones judgments towards likeliness of happening of the condition forecasted). It must be understood that probability assigned here is subjective probability based in personal judgments of the man making such an analysis (*Pandey, 2003: 17*).

Normally, in CVP analysis, sales volume is treated as a random variable. A random variable can be thought of as an unknown quantity. Therefore, the outcome and the decision under CVP are based on the random sales volume of each product. The simplest and widely adopted approach to business decision making under uncertainty is to estimate the likelihood that the random variable will take on various possible values. Such an estimate is called a subjective probability distribution. The decision is then made by choosing that alternative which has the highest expected monetary value.

### **2.1.3 Use of CVP Analysis in Short-term Profit Planning & Control**

Profit planning in fact is a managerial technique and is such a written plan in which all aspects of business organization with respect to definite future period are included. It is a formal statement of policy; plan objective and goal established by the top management in respect of some future period. Profit plan is a pre-determined detailed plan action developed and distributed as guide to current operation and as a partial basis for the subsequent evaluation of performance. Thus, we can say that profit plan is a tool, which may be used by management in planning the future course action and in controlling the actual performance (*Gupta, 1992:522*).

The fundamental concept of PPC includes the following activities of tasks that must generally be carried out to attain maximum usefulness from PPC:

- A management process that includes planning, organizing, staffing, leading and controlling.

- A managerial commitment to effective management participation by all level in the entity.
- An organization structure that clearly specifies assignments of management authority and responsibility at all organization levels.
- A management planning process.
- A management control process.
- A continuous and consistent coordination of all the management functions (Continuous feedback, follow-up and re-planning through defined communication channels (both downward and upward)).
- A strategic profit plan.
- A tactical plan.
- A responsibility accounting system.
- A continuous use of the exception principle.
- A behavioral management program.

CVP analysis is analytical tool for studying the relationship between volume, cost, price, and profit. Basically, CVP analysis is the technique involves finding the most favorable combination of different types of costs. CVP analysis provides the managers with a powerful tool for identifying those courses of action that will or will not increase profitability. CVP analysis is the technique that explores the relationship, which exists, between cost, revenue, output level and resulting profit. CVP analysis can be extended to cover the effects on profit of changes in the selling prices or service fees, cost, income tax rate, total cost, total revenue, and profit at various sales volumes. CVP analysis provides the management with a comprehensive overview of the effects on revenue and costs of all kinds of short-run financial changes. It is related to profit, sales volume and cost. CVP analysis provides information regarding:

- Minimum level of sales to avoid losses.
- Sales level to earn target profit.
- Effects of changes of price, cost and volume towards profit.
- New break-even point for changes.
- Impact of expansion plan on CVP relationship.

- Products those are most profitable and least profitable.
- Whether to continue or discontinue the sales of product or operation of plan.
- Effects on operating profit with the increase in fixed costs.
- Decision regarding special offer (*Munankarmi, 2003: 401*).

Thus, CVP analysis is one of the effective tools for making the profit plan and the objective of CVP analysis is to establish what will happen to the financial results if a specified level of activity or volume fluctuates. If you are going to measure the performance of a department or an activity, then the department and individuals should supply the necessary input to assemble a food plan. As a result, management not only has complete financial forecast as possible but also a clear picture or the operational plans and controls that are currently in place.

## **2.2 Review of Previous Related Studies**

The main objective of this part is reviewed the previous research. It provides the foundation for developing a comprehensive theoretical frame work from which hypothesis can be developed for testing. There are very few research papers concerning comparative cost volume and profit analysis has been conducted. This study is attempted to review the previous research work on profit planning and control as well as management accounting. As CPV 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. An attempt is made here to review some of the research works.

Sharma, (2002) conducted a research entitled "Management Accounting Practices in the Listed Companies of Nepal". Mr. Sharma had concerned his study to examine and study the practice of management accounting tools in the listed companies in Nepal. Mr. Sharma's research is based on primary data only. Stratified random sampling with proportionate allocation of percentage is followed to draw the sample. No secondary data has been used for his study. He selected 9 manufacturing companies for the purpose. In his research, Mr. Sharma has pointed out various findings. Some remarkable findings were as follows.

- Lack of information and extra cost burden are the main-reason behind not practicing such too.
- 100% of manufacturing companies were practicing the tools of cost segregation and, 89% of companies were practicing break even analysis. Practicing of method of segregation into variable and fixed cost in manufacturing companies in Nepal are 44% practiced analytical method, 22% of the- companies use high low method, and average method.
- Management accounting is to help managers in overall managerial activities by providing information and helping in planning, controlling and decision making.
- Practicing of regression method for segregating mixed cost into fixed and variable was nil. The reason behind this was regression method is statistical method which is difficult in application. Besides. It requires expert manpower in statistical methodology. Companies were not ready to hire statistical expert to segregate cost.
- Different types of management accounting tools, which are taught in the colleges, are not found applied by the listed companies of Nepal.
- Nepalese listed companies are in infant stage in practicing of management accounting tools. Such as capital budgeting, cash flow, ratio analysis, zero based budgeting, activity based costing, activity costing, target costing and value engineering.

As Nepal is proceeding towards globalizing and get membership of WTO, companies are recommended to apply management accounting tools to fit with the global.

Baral (2003) conducted research work on topic of profit planning and control of Nepal Tele Communication Corporation for partial fulfillment of MBS, submitted of Shanker Dev Campus, TU. The study had covered five years period of fiscal year 2051/052 to 22055/56 and had pointed out various finding.

- Customers' service and line maintained service are not satisfactory.
- Profit is earning but it is not satisfactory in monopoly situation of NTC.
- Cash budget shows the huge amount of current assets.
- Analysis shows that the fixed cost of corporations highly incurred

- The corporation has no proper practice of segregating cost into fixed and variable.
- Overhead expenses are not classified systematically and it creates problem to analysis expenses properly.
- 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 environment.

Rai (2004) conducted research work on the topic of Profit planning in public utilities sector of Nepal: "A case study of Nepal electricity Authority". For the partial fulfillment of MBS. Submitted to Shanker Dev Campus, TU. This study has covered five year period from FY 2054/55 to 2058/59. Major findings are:

- There is no proper or systematic way to classify the cost. It consolidates all expenditure pertaining to manufacturing, administrative, 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 adequate 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.

Recommendations: Rai has given some recommendations to NEA:

- NEA should stress on efficient control over costs. The widely accepted controlling tools such as standard costing should be applied and separate cost centre should be established.
- Cost volume and profit analysis should be considered while formulating profit plan and the NEA should be establishing flexible budget system.
- Variable analysis should be applied in effective way to control operating Activities.

- Effective utilization of available resources, priority given to the backward society etc.

Rijal (2005) studied on the topic "Cost. Volume and Profit analysis to measure the effectiveness of profit planning and control (.A case study of Nebico Pvt Ltd.)". he study was based on primary data as well as secondary data and analysis based on only five years data. It was submitted to Shankar Dev. Campus, TU, Kathmandu.

He had pointed out some major findings to his research are as follows:

- The company's sales trend has fluctuation but not satisfactory trend of increasing.
- The company's variable cost is high proportion than fixed cost in. comparison with total cost, which contributes for lower contribution margin.
- The goal and objectives of the company are not clearly communicated to operating level of management.
- The company had no effective inventory policy.
- There were not effective sales forecasting techniques.
- There is not ant specially system on taking corrective action for the replanning.
- NEBICO Pvt. Ltd. Had not practice of segregating the cost into fixed, variable and controllable and non-controllable.
- Net profit margin profitability ratio and other things were-not satisfactory.
- The company has not utilized it's full capacity.
- CVP relation is not considered while developing sales plan, production plan and pricing, strategy.

Dhakal (2005) conducted research work on "Cost volume profit analysis as a tools to measure the effectiveness of profit planning and control: A case study Of Gorkhakall Rubber industry limited" in the partial fulfillment for MBS, submitted to Shanker Dev Campus. TU. Dhakal has covered five years period from FY-2056/67 to 2060/61 and listed some findings and recommended. Major findings area :

- 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.
- Girl 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.
- The 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 raw materials scarcity as well.
- Out of the two main product truck tyres and non truck tyres, the truck tyres are more profitable than 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 ratio not satisfactory.

Recommendations are:

- GRIL should clearly define its goals and objectives and management should develop annual (tactical) and (strategic) long term profit plan.
- The industry should establish separate costing department, if possible and cost classification must be made within a specific framework of responsibility and time.
- The Industry should consider 'the cost volume profit relationship while fixing price of its products.
- GRIL is bearing huge amount of fixed costs for employees' expenses which is not good for the organization. It should initiate the cost control program.
- To improve profit planning system is GRIL, trained and qualified professional should be hired.
- The industry should utilize its full capacity, so that per unit cost of tyre will be comparatively low.

- Industry should allocate more resources to track tyres, which might help to improve the present condition of loss etc.

Dahal (2006) studied on the topics of "Cost- Volume -Profit Analysis as a tool to measure the effectiveness of profits planning with special reference to Dabur Nepal Pvt. Ltd." This was submitted to Nepal Commerce campus T.U. in Partial fulfillment of Master's Degree in the year 2006.

**The main objective of the research was :**

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

To conclusion of the research regarding the present practice of profit planning Dabur Nepal Pvt. Ltd. has given below:-

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

The researcher also provides the following recommendations:

- CVP analysis should be considered while formulating profit plan.
- Profit planning manuals should be communicated from top level to lower level.
- The company management should look carefully into the basis of setting for sales and achieving, those targets meaningfully.
- Dabur Nepal Pvt. Ltd. should focus on the relationship between and controlling is necessary to obtains company's goals.

- To get the idea of future cash requirement and application of the firm, it should make cash budget systematically.
- The company should prepare raw material budget and production budget scientifically.

Gautam (2006) conducted research work on "An analysis and comparative study on cost, volume and profit analysis of Uni - lever Nepal and Dabur Nepal Pvt. Ltd." in the partial fulfillment of the Requirement for the Degree of Master in Business Studies (MBS). submitted to Nepal Commerce Campus , TU. He had covered five years period from fiscal year 2001/02 to 2005/06 and listed some findings.

- Expenses trend of Kantipur Publication and DNPL is increasing year by year except in the last year.
- Both companies sales achievement is higher than sales target in 2 years and nearly 100% in 2 years. The correlation between target sales and actual sales is positive. It reveals that the company is able to meet its goal in annual report. The company tried to apply effective sales forecasting technique.
- The company has no detailed and systematic expenses plan. The fixed variable and mixed expenses plan is the necessary elements for profit planning and control.
- The cost of Kantipur Publication and DNPL is classified into fixed and variable. There is no practice of identifying semi variable cost and their segregation into variable and fixed by using scientific method.
- The proportions of variable costs are higher than fixed cost in total
- cost amount of both companies, which contribute for lower contribution margin.
- Financial position of the DNPL is not so good and Kantipur Publication's is good. Net profit margin of Kantipur Publication is higher than the DNPL. Profitability ratio and other times of DNPL is not satisfactory but Kantipur Publication's is satisfactory.
- From hypothesis test. it was found that there was significant relationship between cost volume and profit of Kantipur Publication and DNPL.
- The DNPL Company's operating leverage is increasing, so small fall in sales may result the demise of the company but the Kantipur Publication Company's operating leverage is constant.

- DNPL's CM ratios are decreasing but Kantipur Publication's CM ratios are increasing.
- As the DNPL company has low MOS, the company might be at risk and the Kantipur Publication company has high MOS, the company might be bearing at very low risk.

Pokharel (2007) prepared the thesis entitled "Cost - Volume -Profit Analysis of Manufacturing Organization (Special Reference to Himalayan Distillery Limited)". This was submitted to Nepal Commerce Campus. TU, Kathmandu.

The following are the objectives of the study:

- To ascertain the current status of the Himalayan Distillery Ltd in term of major indicator.
- To examine how the HDL has applied the profit planning system in their organization and its practice.
- To analyze the various functional budgets adopted in this enterprise.
- To evaluate the variance between budgeted and actual of the enterprise.
- To analyze the trend of profit over the time covered by the study.
- To identify the problems faced by the HDL.
- To prescribe remedies for these problems.
- To point out suitable suggestion and recommendation.

The major findings of the study are as follows:-

- There is lack of entrepreneurship and business skill and proper coordination between the various responsible departments.
- Authorities and responsibilities are not clear among the department and working managers and role conflict and lack of coordination between them is paramount.
- Specific goals and objectives are not conveyed to lower level of management it denotes the absence of management by objectives principal of management.
- HDL faces some problems in receiving of raw materials.
- There is no proper practice of cost segregation.
- There is lack of proper marketing system.

- In HDL budget are prepared just to fulfill the formalities, these are not used effectively for the profit planning process.
- HDL is guided by Nepal Government. Directly or indirectly it intervenes in setting objectives goals and strategies in HDL.
- Therefore, whether their aim is to maximize profit or maximize social service is not clearly distinguished.
- More bureaucratic formalities of Nepal Government on preparation approval and implementation of different plan, policies and strategic keep HDL for behind from its competitor in promoting the goods.
- Centralization of planning and decision making has created in organization.
- The capacity utilization is near about of 70%.
- There is no systematic profit plant in HDL.
- The enterprise fails to analyze its strength and weakness in depth.
- Nepal Government is the main authority is fixing price and does not have ant clear policy and method of pricing in HDL.

Sijakhwo (2009) has submitted his thesis entitled *CVP analysis as a Managerial Tool in Bhaktapur Craft Paper Limited*. His research was submitted to Shanker Dev Campus, T.U. in partial fulfillment of Master's Degree in the year 2008.

**His objectives:**

- The study the relationship of cost volume and profit BCP Ltd.
- To analyze the impact of CVP of the company productivity.
- To calculate BEP, MOS, CM etc. and its impact on the profitability.
- To make suggestions for future prospects, problems and promotion of the Bhaktapur Craft Paper Ltd. through this study.

**His major findings:**

- Very high degree of correlation between sales and total costs showed that if total costs changed, it would affect the sales revenues of the company duet o sales and total costs relation should be considered.
- Company should attention to improve performance, using management principles like MBO, participating management activities etc.

- Scientific costs segregation method (i.e. Least square method) should be used for costs segregation as mixed costs into fixed and variable cost that help to control cost minimize.
- Research is focused immediately to improve cost analysis by using CVP analysis as tools of PPC.

Ghimire (2010) has submitted his thesis entitled *Analysis of CVP of manufacturing organization: A Case study of Dabur Nepal Pvt. Ltd.* Shanker Dev Campus, Kathmandu.

**His objectives:**

- To evaluate the impact of the profit of Dabur Nepal Pvt. Ltd.
- To show the relationship of cost, volume and profit between multi product of the organization.
- Examine the variance between target and actual sales and production.
- To provide appropriate suggestions on the basis of major finding of the study.

**His major findings:**

- Management of the company is not taking interest for BEP analysis.
- The company facing the political problem. So, government should take attention for the decision.
- Management of the company is not in favour of segregation of cost in variable and fixed, mostly it used as variable and fixed cost whatever the nature of cost.
- Net profit margin profitability ratio and other things were not satisfactory.
- The total sales revenue of the company is less fluctuating.
- Ghimire is focusing on his research for find out the position of total budgeted sales, actual sales, BEP, MOS, and CM of the Ltd, which is enable to show relationship between cost, volume and profit as much clearly.

Rijal (2012) has conducted a research “ Cost- Volume-Profit Analysis as a Tool to Measure Effectiveness of Profit Planning and Control: A Case Study of Nebiko 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. Rijal had point out some remarkable findings of research and which are:

**Major findings of the study:**

- Nabiko's variable cost is high in portion than fixed cost, which contributes for lower contribution margin.
- Lack of effective cost control and program or technique
- The profit proportion of the company is very low.
- There is no effective inventory policy in the company.
- The company has no detailed of any systematic plan.
- The board of director is the main body of price determination and he interferes directly in the price decision.
- Nebiko has not proper practice of segregation of cost.
- There is not proper co-ordination among production, administration, distribution, inventory and sales department.

Katwal (2012) has submitted his thesis on the topic "Cost Volume Profit Analysis of Bottlers Nepal Limited" with some remarkable objectives for measuring the applicability of CVP analysis on budgeting, for finding the profitability of the Bottlers Nepal Pvt. Ltd as a tool of financial performance analysis, for the examination of the risk position, and then Mr. Katwal concluded some remarkable finding with respect to these objectives are as follows:

**Major findings of the study:**

- BNL does not practice the scientific and appropriate cost classification technique.
- BNL has not maintain proper sales plan
- Out of total cost of BNL, variable cost is almost 60% in every year, which causes the low contribution margin.
- The company has moderate risk.
- The actual sales of BNL have crossed the BEP for five years. So, the company is in profitable condition.
- The financial position of the company is profitable.
- The company has not maintained the broad and long-term objectives.
- Only the top executives are involved in planning and decision-making and lower participation is not encouraged.

- The fixed cost of BNL is fluctuated trend. It means the BNL is unable to manage the fixed cost.
- There is not systematic purchasing of necessary equipment and fixed assets.

### **2.3 Research Gap**

All the previous research works were done on PPC of manufacturing company. The research studies have recommended an effective implementation of PPC. Some research was done on CVP analysis as an important tool of PPC. One research conducted on practice of management accounting in listed companies of Nepal focusing on the overall aspect of management accounting but could not deal on specific tools like CVP. This is the age of specialization not generalization. It is realized that specific tool becomes more effective rather than using overall tools as a whole of once. This is the main weak point of the previous researches. One research on CVP analysis was made but failed deal on utilization of CVP. Thus to fill up these gap the current research was conducted. Mainly this research focused on operating position of the organization. Therefore, profit and loss account was the focal point of the study of this research. Profit and loss account fully provides the information of revenue and cost. Clear picture of CVP and its impact on productivity were made in this research. Probably this might be the first research study in the sense of providing multi product analysis carried on this topic in Nepal.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

Research is the process of arriving at the solution of a problem through an organized and systematic investigation of facts and figures related to it. This process involves a series of planned activities of gathering, recording, analyzing and interpreting the data.

Research methodology is the way to solve systematically about the research problem. It helps to analyze, examine and interpret various aspects of research works such as sales, production and profit planning. So, this part is concerned with research methodology applied in this study. This chapter deals with the brief conceptual review of research design of this study and the research methodology used to achieve the objectives of study so that the proper recommendations may be given to the concerned enterprises. Thus, this chapter plays vital role to accomplish the study in realistic term with sound empirical analysis.

#### **3.1 Research Design**

Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and control variance. It provides a way to reach to research objectives.

Data and information are the lifeblood or major portion of any study. This study would be attempted to show the relationship among cost, volume profit and various functional budgets for solving the problems that has accrued in KP. Cost, volume and profit analysis of KP is presented and analyzed by descriptive research design and analytical method. A study design is the arrangement of the conditions for correction and analyze of data in manner that aims to combine relevance to the study purpose with the economy in producer. These studies with an intensive based on analysis of the past financial performance.

To fulfill the objective of the study primary as well as secondary data will be used and study design will be descriptive as well as analytical to analyze the company's performance.

### **3.2 Population and Sample**

The large group about which the generalization is made is called the population under study, or the universe and small portion on which the study is made is called the sample of the study.

Research population have been considered as all publication companies of Nepal. Due to various circumstances it would not be possible to attempt all the number of research population regarding in this dissertation. To convenient the research, only Kantipur publication have been selected as sample for study.

### **3.3 Source and Nature of Data**

Nature and source of data of this research is secondary as well as primary as they have been collected from concern authority and opinion survey.

#### **3.3.1 Primary Source of Data**

A set of questionnaire has been prepared and distributed to the employees of Kantipur Publication, Subidhanagar, Kathmandu. The purpose of primary survey was to find out the opinion regarding the impact of cost-volume-profit analysis technique on profitability. For this purpose, only 25 employees have been selected purposively and tried to get the information from them. Out of them, only 20 questionnaire were returned. So, only 20 respondents has been considered for primary data analysis.

#### **3.3.2 Secondary Source of Data**

Data already use are the secondary source of data. Secondary data have been taken mainly from annual reports, auditor reports, balance sheet, profit and loss account, cost detail sheet, previous thesis and other recent publish and unpublished documents related to Kantipur publication. The research has tried to cover the activities of the Kantipur Publication Ltd. For last five year data from the fiscal year 2063/064 to the fiscal year 2067/068.

### **3.4 Data Analysis Tools and Techniques**

To satisfy the research questions different statistical as well as accounting tools has been use in this research work.

### 3.4.1 Statistical Tools

For the purpose of analysis and presentation of research work in beautiful manner different statistical tools and techniques have been used in this thesis. It is hope that the tool and techniques will be sufficient enough to present the analysis and findings of the research work in simple but beautiful manner. Data tabulation, graphic approach regression methods have been use for the sake of tabulation of data and classification the mixed cost into fixed and variable costs.

### 3.4.2 Accounting Tools

As per the demand of the research topic the cost of the company is supported to be dividing into fixed and variable in the first step. Then different tools of cost volume profit analysis are to be used. On the basis of available time constant, data constant and other resource constant different tools of CVP i.e BEP analysis, required sales for target profit, margin of safety, sensitivity analysis have been used as accounting tools in this research work.

C.V.P Analysis was included the following techniques:

Contribution margin (CM)	=sales-variable cost
Contribution margin Ratio	= $1 - \frac{\text{variable cost}}{\text{sales}}$
Breaks Even point (BEP) in units	= $\frac{\text{Total fixed cost}}{\text{SPPU}-\text{VCPU}}$
Breaks Even point BEP (in Rs)	= $\frac{\text{Total fixed cost}}{\text{CM Ratio}}$
Cash BEP (in rs )	= $\frac{\text{Fixed cost}-\text{Noncash outlay}}{1-\frac{\text{variable cost}}{\text{sales}-\text{Non cash outlay}}}$
Required sales for desired profit (in units)	= $\frac{\text{FC}+\text{Desired Profit}}{\text{CMPU}}$
Required sales for desired profit (in rs)	= $\frac{\text{FC}+\text{Desired Profit}}{\text{CMRatio}}$
Required sales in units for DPAT	= $\frac{\text{FC}+\frac{\text{DPAT}}{(1-t)}}{\text{CMPU}}$
Required sales Rs for DPAT	= $\frac{\text{FC}+\frac{\text{DPAT}}{(1-t)}}{\text{CM Ratio}}$
Safety margin (in units)	=Actual sales units-BEP in unit
Safety margin (in Rs)	= Actual sales in Rs - BEP sales in Rs
Margin of safety Ratio	= $\frac{\text{Actual}\backslash\text{Budgeted sales}-\text{BE sales}}{\text{Actual}\backslash\text{Budgeted sales}}$

## CHAPTER-IV

### DATA PRESENTATION AND ANALYSIS

#### 4.1 Introduction

Data presentation and analysis is the important part of the research work. It is known as heart of research. Major findings of the research depends on the data presentation and analysis. Here, the researcher has tried to present and interpret the collected data in a systematic manner and meaningful ways. Mainly, to fulfill the objectives of the study required factors about CVP analysis are presented and analyzed.

#### 4.2 Sales Plan of Kantipur Publication

Sales are the major sources of revenue and profit. The sales plan should be as realistic as possible. If the sales plans are unrealistic then all other elements of profit plans will be out of reality. Kantipur publication fixes only the sales target for the coming year. It has no practice of preparing the long term sales plan. There is no exercise of preparing sales plan by lines and services. The publication has not the problems of saving its services but problems of providing services in the demanding time.

##### 4.2.1 Sales Value Analysis of Kantipur Publication

Sales value means the total monetary value of unit sold of the publication The Kathmandu Post, Sarbottam Nari, Nepal Saptahik, Saptahik)with in the period of cost five years or an annual basis of Kantipur publication Pvt. Ltd.

**Table No. 4.1: Sales Trend of Kantipur Publication Pvt. Ltd. (in %)**

Details	Fiscal Year				
	2063/064	2064/065	2065/066	2066/067	2067/068
Kantipur Daily	64.04	62.10	62.34	67.60	67.88
Kathmandu Post	20.61	20.76	20.60	14.73	12.57
Sapatahik	6.71	6.65	6.60	6.80	8.33
Nepal Saptahik	5.95	7.76	7.79	8.12	8.29
Sarbottam Nari	2.66	2.73	2.67	2.75	2.93
Total	100.00	100.00	100.00	100.00	100
Increase/Decrease	-	5.3%	8.9%	21.71%	3.41%

Source:- Unpublished records of Kantipur publication Pvt.Ltd., 2012.

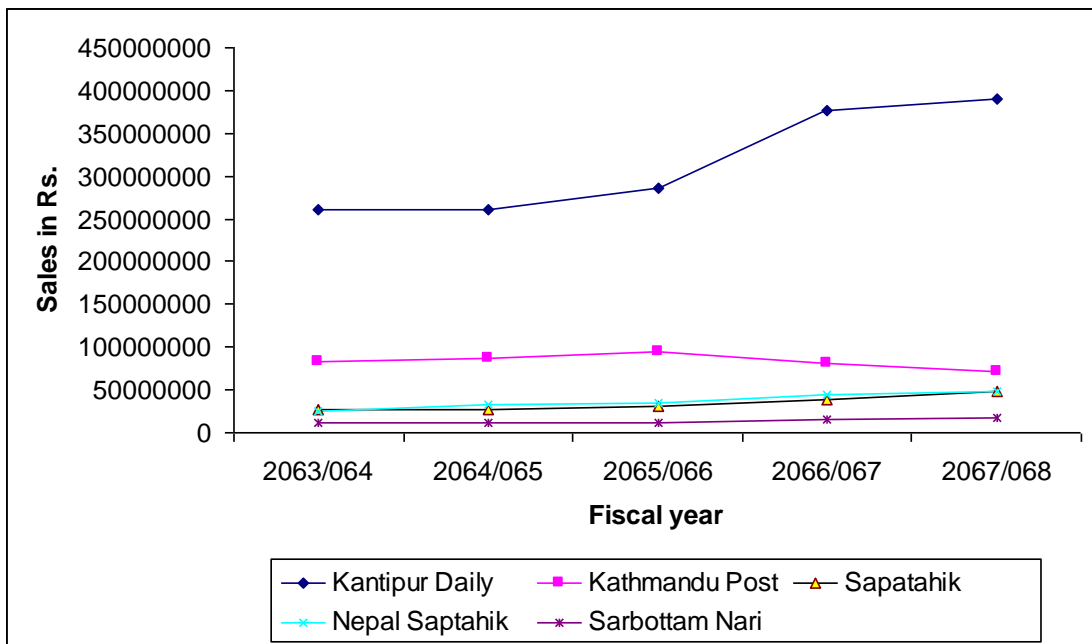
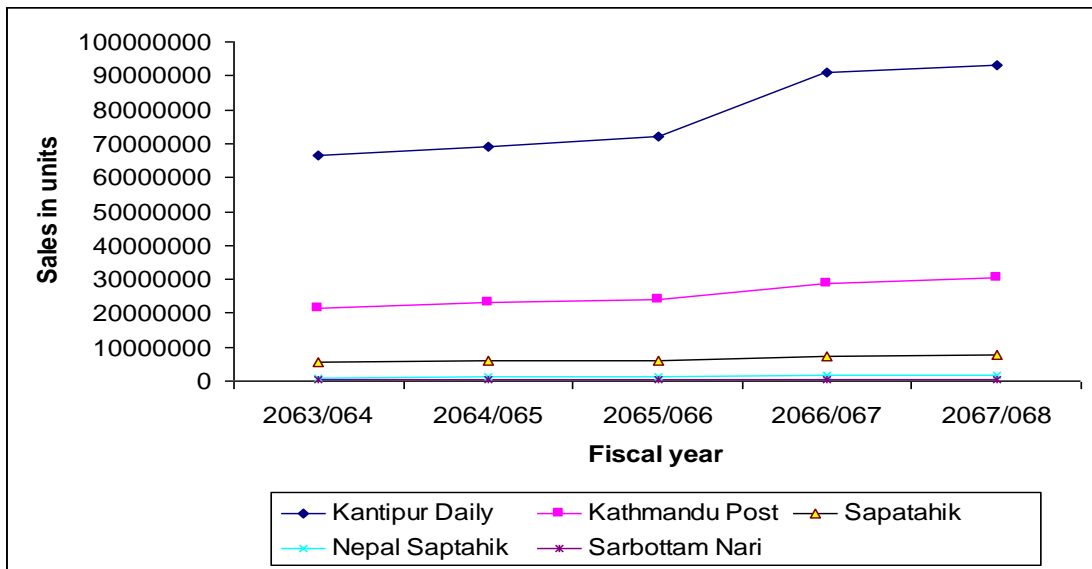
Table 4.1 shows that the sales volume and value for the past five fiscal years from 2063/064 to 2067/068 of Kantipur Publication Pvd.Ltd. There is a variation in sales because of difference in demand, cost of products, nature of competition, government policy, social political factors & product prices etc. The sales units and values are in fluctuating trend for different publications.

In the fiscal year 2063/064 the circulation of Kantipur daily occupied 64.04% share. The Kathmandu Post was 20.61%, saptahik was 6.71%, Nepal saptahik was 5.95% and sarbottam Nari was 2.66% sold in all over the country with respectively which is increased 5.3% as compared to total sales value of FY 2063/064 and same as increased by 8.9% in FY 2065/066 compared to FY 2064/065 of total sales value. Similarly, increased by 21.71% in FY 2066/067 as compared to FY 2065/066 of total sales value. Similarly increased by 3.41% in FY in 2067/068 as compared to FY2066/067 of total sales value. In the fiscal year 2067/068 the circulation of Kantipur daily was 67.88%, The Kathmandu post was 12.57%, saptahik was 8.33%, Nepal saptahik was 8.23% and sabotham nari was 2.93% sold in all over the country respectively. This is increased by 3.41% as compared to total sales value of FY 2066/067.

From the above figure it can be concluded that the sales trend of Kantipur publication has been in increasing trend which shows the company is benefited due to increment of sales in each fiscal year.

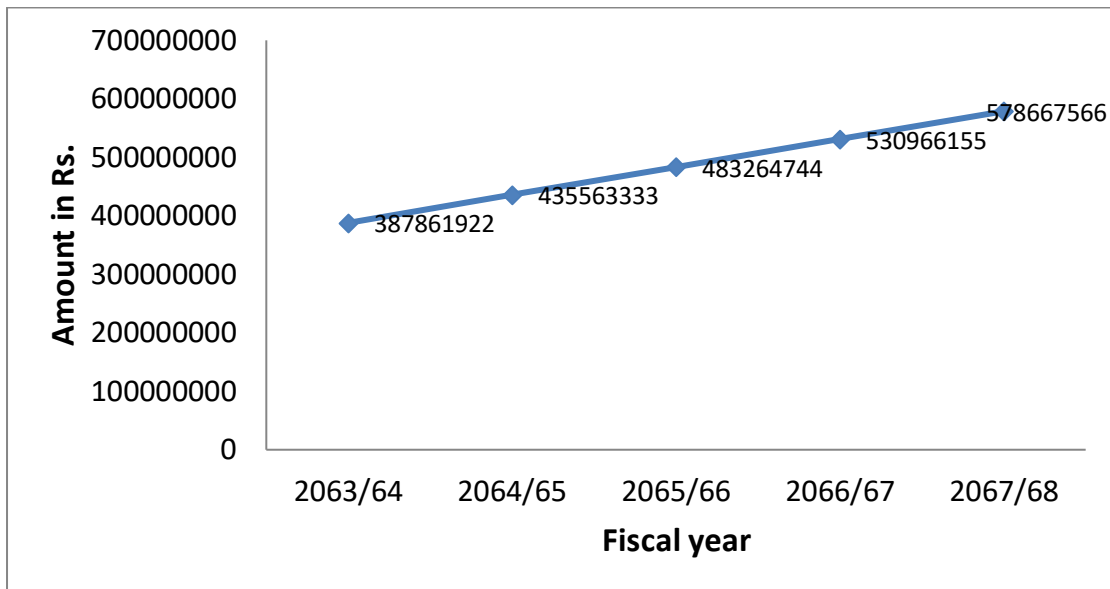
Sales trend of Kantipur publication in different years is also presented.

**Figure No. 4.1**  
**Sales Trend of Kantipur Publication**



To analyze the trend of actual sales of the company, least square method can be used to format possible future scales for given time or year.

**Figure No. 4.2**  
**Sales of Kantipur Publication**



Source: Appendix III

Cost of sales is a part of production cost which are related with raw material, lab chemicals, production salary, wages, electricity cost, water cost, launch cost, provident fund and subsidies factors land and building reports and result repairs of machinery his miscellaneous cost etc.

Administrative expenses refers to the cost management and of secretarial accounting and administrative service, which can not be directly related to production, selling or other development functions of the enterprise. Example are salaries to staff, accountants, rent rates, depreciation of fixed assets, postage, stationery, legal and professional change, board meeting fee, insurance, audit fee indirect repair an maintenance, general changes, warehouse expenses and business development expenses etc. selling and distribution cost effects the professional profit of a company. Selling and distribution expenses includes all costs related to selling, distribution, advertisement and sales promotion royalty freight out wards, excise duty etc.

Kantipur Publication Pvt. Ltd. classifies its total cost into variable cost and fixed cost related to cost of sales administrative and selling and distribution cost for the purpose of CVP analysis. Due to the nature of data the costs can be classified in to following heads.

### 4.3 Cost Analysis

#### 4.3.1 Variable Cost Analysis

Variable cost varies in proportion to change in output or activities level but per unit variable cost is constant within a certain period Variable costs are controllable cost. So management has to give priority to control variable cost. Variable cost of Kantipur Publication is those cost which varies in direct proportion to change in output or activities level but per unit is constant within one financial year. Variable cost per unit varies for different financial years as affected by internal and external environment of the publication. Table 4.3 shows the details of variable cost of the publication.

**Table No. 4.3: Composition of Variable Cost of Kantipur Publication in different year (in %)**

Particulars	2063/064	2064/065	2065/066	2066/067	2067/068
Raw material	54.94	56.54	59.32	66.77	69.15
Printing materials	20.21	19.36	17.96	14.67	15.28
Lab chemical	0.49	0.51	0.46	0.38	0.37
Salary and wages	7.62	7.54	6.84	5.66	5.46
Fuel and Oil	0.36	0.32	0.31	0.25	0.23
Electricity cost	5.68	5.89	5.25	4.37	4.14
Water cost	0.06	0.05	0.05	0.04	0.04
Launch cost	1.47	1.47	1.33	1.10	1.15
Miscellaneous	0.09	0.18	0.08	0.07	0.07
Employee bones	0.22	0.15	0.16	0.12	0.13
Operating allowance	0.43	0.40	0.04	0.30	0.75
Fuel and moving cost	1.05	0.98	0.88	0.74	0.75
Distribution costs	7.39	6.61	7.32	5.53	2.94
Total	100.00	100.00	100.00	100.00	100.00
Increase/decrease	-	4.82%	10.25%	15.77%	6.06%

*Source:-Unpublished records of Kantipur publication Pvt.Ltd., 2012.*

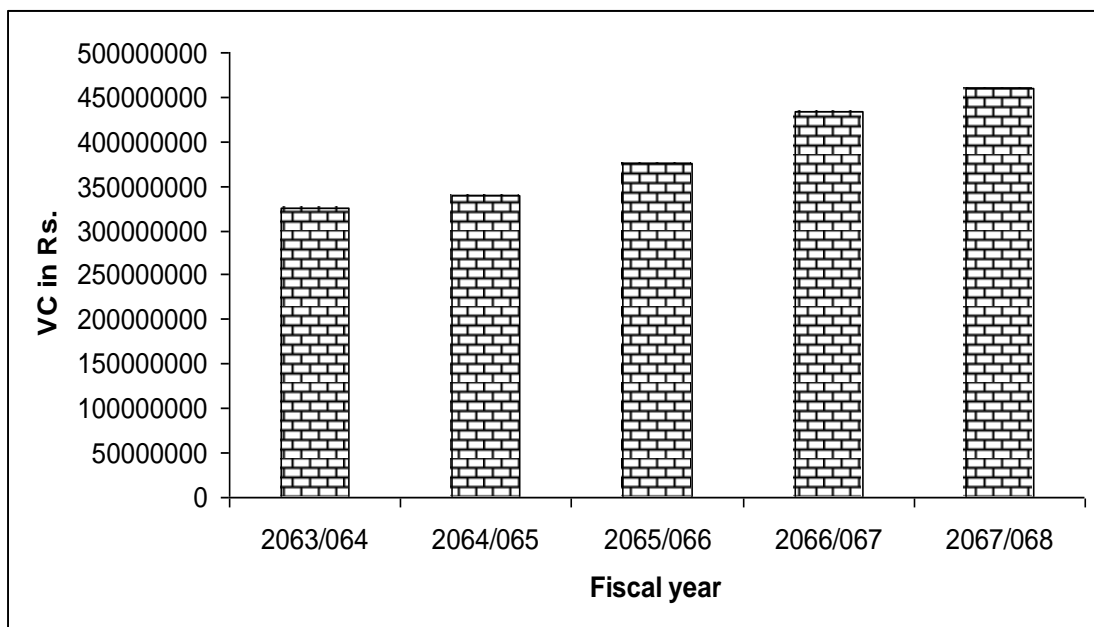
Table 4.3 shows that there are variation in variable costs of sales, administrative costs and distribution costs for different years because various factors affect those cost from different angle. All these variable cost shows fluctuating trend. In Kantipur Publication, variable cost is increased by 4.82% in the fiscal year 2064/065 and than

previous year. In the F.Y. 2065/066 the variable cost of Kantipur Publication is increased by 10.25% than previous year, in F.Y. 2066/067 the variable cost of Kantipur Publication is increased by 15.77% than previous year. In F.Y. 2067/068 variable cost is increased by 6.06% than previous year.

From the analysis of the above table, it is clear that the variable cost of Kantipur Publication is increased continuously except on F.Y. 2066/067. But the percentage changed in variable cost is in functioning trend. High portion of Variable cost of raw materials, the company spent huge amount of promotional expensive but lowest quality control. The real situation of the Variable cost of the company can be seen from the following bar diagram.

Variable cost of Kantipur Publication which has described above can be also shown by bar diagram below:

**Figure No. 4.3**  
**Variable cost of Kantipur Publication**



The amount of variable cost can be clearly presented with the help of the chart. The figure 4.3 shows that the variable cost moved upwards during the study period.

#### 4.3.2 Fixed Cost Analysis

Fixed costs remain constant in total despite the charges in the level of activity within every year when production cost or service cost are charged but fixed cost remains the

same. The per unit fixed cost may decrease while the numbers of production units are increased. Though, fixed cost in total may vary for different fiscal year due to internal and external environmental factors of the companies. The fixed costs of Kantipur publication presented here are based on the assumption and nature of cost Fixed cost of Kantipur Publication is presented in table 4.4

**Table No. 4.4: Composition of Fixed Cost of Kantipur Publication in Different year (in %)**

<b>Particulars</b>	<b>2063/064</b>	<b>2064/065</b>	<b>2065/066</b>	<b>2066/067</b>	<b>2067/068</b>
Manufacturing wages and salary	13.36	14.09	13.91	14.00	14.40
Land and building	3.27	3.74	3.54	3.65	3.84
Provident fund subsidies	0.15	0.17	0.16	0.17	0.17
Repairs	5.14	4.71	5.00	4.86	4.80
Miscellaneous	0.93	0.95	0.95	0.95	0.79
Administration Salary	13.86	13.13	13.14	13.30	13.44
Launch cost	2.01	2.01	1.96	2.01	2.16
Provident fund	2.81	2.06	2.36	2.25	1.51
Employees quarter	0.61	0.45	0.51	0.49	0.48
Office repairs maintenance	0.03	0.31	0.29	0.30	0.27
Printing and stationery	0.47	0.51	0.48	0.49	0.48
Telephone wire and postage	1.99	2.14	2.02	2.10	2.09
Advertisement on TV	0.68	0.56	0.60	0.59	0.60
License and insurance	1.88	1.64	1.71	1.69	1.68
Hospitality and pray cost	2.25	2.36	2.26	2.34	2.28
Vehicle repairs cost	0.67	1.80	1.94	1.89	1.89
Advisor and auditing	0.92	0.91	0.90	0.92	0.90
Bonus Commission	0.27	0.35	0.30	0.33	0.30
Training and dress cost	0.56	0.49	0.51	0.51	0.51
Technical and computer fee	5.20	5.14	5.05	5.16	5.10
Security cost	2.61	2.49	2.48	2.52	2.52
Donation and membership fees	0.49	0.46	0.47	0.47	0.47
Depreciation	8.95	9.36	12.76	12.77	9.60
Interest	13.58	15.42	12.84	13.15	13.58
Miscellaneous	0.15	0.14	0.13	0.15	0.14
Total fixed cost	100.00	100.00	100.00	100.00	100.00
Change	-	0.13%	0.96%	(4.86)%	0.21%

*Source:-Unpublished records of Kantipur publication Pvt Ltd., 2012.*

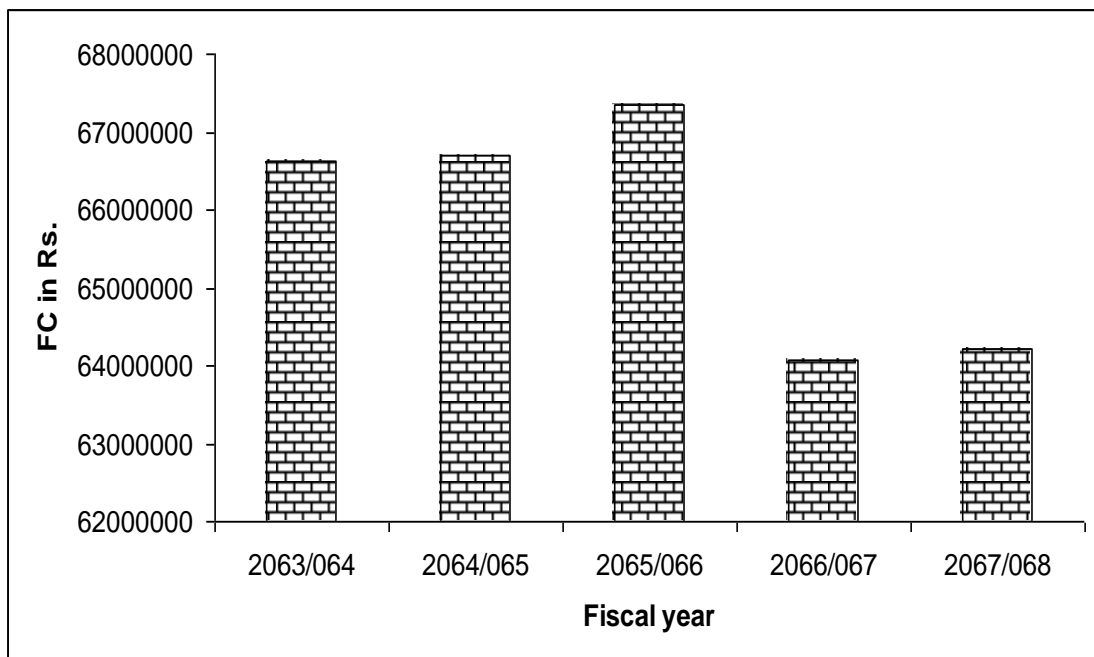
The total fixed composition of Kantipur publication is shown in above table. Manufacturing wages and salary occupies highest share of total fixed which is 13.36%, 14.09%, 13.91%, 14.00% and 14.40% in FY 2063/64 to 2067/68 respectively. Whereas office repairs and maintenance is least which is 0.03%, 0.31%, 0.29%, 0.30% and 0.27% in FY 2063/64 to 2067/68 respectively.

In Kantipur Publication total fixed cost is in fluctuation trend. Total fixed cost of Kantipur Publication increased by 0.13% in 2063/64. In F.Y. 2065/066 fixed cost is increased by 0.96% than previous year. In F.Y. 2066/067 its total fixed cost decreased by 4.86% but in F.Y. 2067/068 fixed cost is increased by 0.21% than previous year.

The total fixed cost of Kantipur Publication is very high. High fixed cost increases the breakeven level. So, the management should try to reduce the unusual fixed cost by preparing strategic plans. Actually fixed cost is fluctuated by different level of outputs, changes the rate of different items every year, Behavior of employees, proportion of Fixed cost of Kantipur Publication which is described above can be clearly shown by bar diagram below.

Fixed cost of Kantipur Publication can be also shown by graph below:

**Figure No. 4.4**  
**Fixed cost of Kantipur publication**



From the above figure it can be concluded that the fixed of Kantipur Publication has been increasing till 2065/066 and decreased then after because it has increased its production. Since fixed cost and level of production has reverse relationship, fixed cost of Kantipur Publication has been decreasing.

#### **4.3.3 Semi Variable Cost Analysis**

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

On going through interview with publications operating managers administrative manager, account in chief and other related employees reveal that practice of identification of semi variable cost and their segregation into fixed and variable was not found.

#### **4.4 Income Statement Analysis**

Income is computed by deducting all expenditure from turnover. It is surplus of sales over-expenditure. Income measures the real performance of the company. High income indicates good performance whereas low income indicates threat to the company. Value of income is received by deducting fixed and variable cost from sales. When variable cost is deducted by sales the result is called contribution margin and net profit can be ascertained deducting fixed cost from contribution margin. Much information can be presented with the help of income statement.

**Table No. 4.5: Income Statement of Kantipur Publication (in Rs.)**

Particular	2063/064	2064/065	2065/066	2066/067	2067/068
Sales Units	94370263	100033307	103992467	129514284	133933354
1. Sales revenue	405792133	420139888	457566854	556911420	575913420
2. Variable cost	324633706	340313309	375204820	434390908	460730736
3. CM (1-2)	81158427	79826579	82362034	122520512	115182684
4. Total fixed cost	66621447	66708106	67345500	64079581	64214875
5. Profit loss (3-4)	14536980	13118473	15016534	58440931	50968409
6. Other income	3690084	9571399	3430688	9950732	9963103
7. Profit loss (5+6)	18227064	22689872	18447222	68391663	60931512
8. Profit margin	4.49%	5.40%	4.03%	12.28%	10.58%
9. Increase/decrease	-	20.27%	25.37%	204.72%	(13.84)%
Operation leverage	4.45	3.52	4.46	1.79	1.89
VV Ratio	79.99%	80.99%	81.99%	78%	80%

*Source: Unpublished records of Kantipur publication Pvt. Ltd., 2012.*

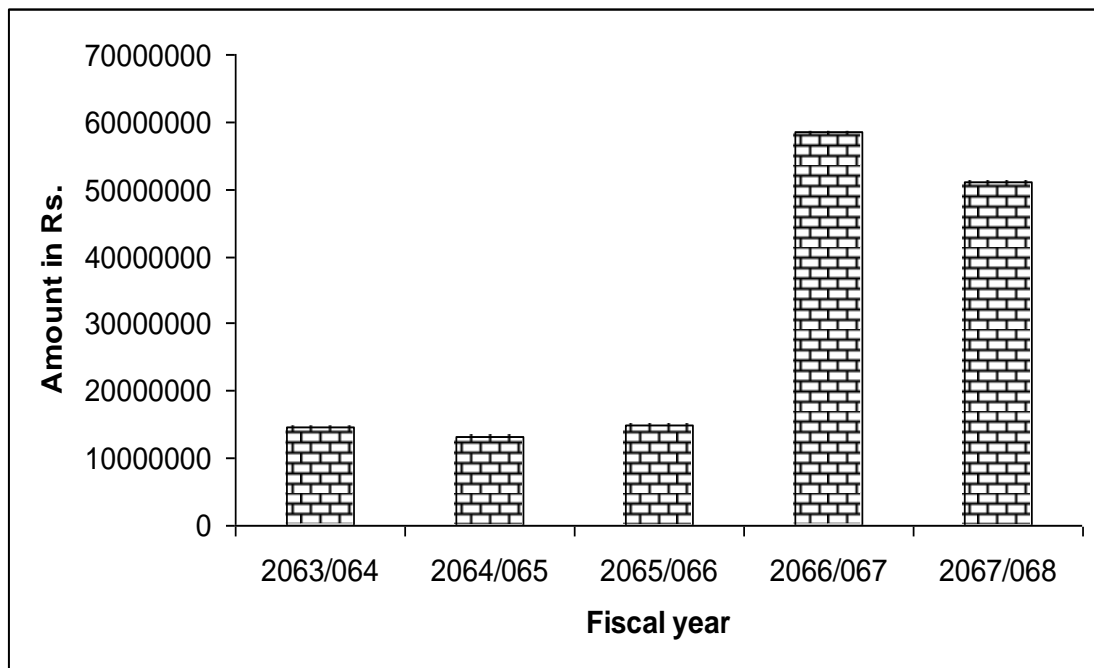
Table 4.5 shows that the Publication, is earning profit in increasing and decreasing trend. The profit of Kaniipur Publication is increasing in fluctuating rate through out the study period. In FY 2064/065 profit is increased by 20.27% in comparison with previous year's profit. Variable and fixed costs are also increasing. Profit on sales in 4.49%, 5.4%, 4.03% 12.28% and 10.58% in year 2063/064 to 2067/068 respectively. In year 2066/067 profit is 12.28% and 10.58% in year 2063/064 to 2067/068 respectively. In year 2065/066 profit is 12.28% which is highest profit percentage amongst the years. In year 2066/067 company's rate of percentage change in profit is reduced by nearly 14% which is not good sign. The variable cost were 79.99%, 80.99%, 87.99%, 78.% and 80% in the fiscal year F/Y 2063/064, 063/064, 065/066 and 066/067 respectively. Nearly 80% of total sales was cover by variables cost but the coverage of fixed cost on sales was below 10%. The proportion of variable cost is eight times greater than the proportion of fixed cost. This indicates that the company is none leverage organization. Variable cost change with the change in activity level but the fixed cost remain constant up to the certain level of variable cost increase with level of output but the fixed cost remains constant, that is why fixed cost is defined as leverage cost. Therefore the company most maintain higher proportion of fixed cost on its cost structure to increase more profit with increase in sales. The operating

leverage 4.45, 3.52, 4.46, 1.79 and 1.89 in the F/Y 2063/064, 063/064, 064/065, 065/066 and 066/067 respectively.

From the point of view of profitability the degree of operation leverage indicates lower amount of operation risk. The company has low amount of fixed cost. So it has lower value of operating leverage.

Profit or loss situation of Kantipur Publication, which is described above can be also shown by bar diagram below.

**Figure No. 4.5**  
**Profit/Loss of Kantipur Publication**



#### 4.5 Analysis of Contribution Margin Ratio, BEP and Margin of Safety

It is very necessary to know the BEP for every organization. BEP can be computed in Rs. and Unit.

$$\text{BEP in unit} = \frac{\text{Fixed Cost}}{\text{CMPU}}$$

$$\text{BEP in Rs} = \frac{\text{Fixed Cost}}{\text{CM Ratio}}$$

The wide margin of safety is advantageous for the company. Margin of safety depends on level of fixed cost, rate of contribution and level of sales. The relationship of margin of safety with sales can be expressed.

Margin of safety = Actual sales - BEP sales.

Contribution margin is the difference between sales amount and variable cost. In other words fixed cost plus the amount of profit is equivalent contribution margin. Contribution margin is known as profit volume ration (PV ratio) or CM ratio. Contribution margin can be presented as follows.

Contribution margin (CM) = Sales value - Variable cost

Contribution margin or (CM) = profit + fixed cost

**Table No. 4.6: Computation of Various Ratios of Kantipur Publication (In Rs.)**

S.N.	Particulars	2063/064	2064/065	2065/066	2066/067	2067/068
1	Sales	405792133	420139888	457566854	556911420	575913420
2	CM	81158427	79826579	82362034	122520512	115182684
3	P/V ratio	0.20	0.19	0.18	0.22	0.20
4	Fixed cost	66621447	66708106	67345500	64079581	64214275
5	BEP	333107235	351095294	374141666	291270822	321071375
6	BE % on sales	82.09	83.57	81.77	52.30	55.75
7	MOS	72684898	69044593	83425187	265640597	254842045
8	MOS% on sales	17.91	16.44	18.23	47.70	44.25
<b>BEP (Rs.) Considering other income and expenses</b>						
9	Other income	3690084	9571399	3430688	9950732	9963103
10	FC	62931363	57136707	63914812	54128849	54251172
11	BEP (Rs.)	314656815	3007195105	355082288	246040222	27125580
12	MoS	91135318	11942035	102484561	31087117	30465750
13	MoS % on sales	22.46	28.42	22.40	55.82	52.90

*Source:-Unpublished records of Kantipur publication Pvt.Ltd., 2012.*

#### **4.5.1 Contribution Margin**

Table 4.6 shows that the calculations of contribution margin of Kantipur Publications Pvt. Ltd. for the five fiscal years 2063/064 to 2067/068. Contribution margin for the five years show fluctuating trend. Contribution margin for five fiscal year are Rs. 81158427, Rs. 79826579, Rs.82362034, Rs. 122520512 and Rs. 115182684. Contribution margin ratio of KP is 0.20, 0.19, 0.18, 0.22 and 0.20 in Fiscal Years 2063/064 to 2067/068 respectively.

High contribution margin is the signal of high profit. Table clearly shows that the condition is best of Kantipur Publication from contribution margin approach.

#### 4.5.2 Break Even Point

Table No. 4.6 clearly shows that the calculations of Break-Even-Point of Kantipur Publications Pvt. Ltd. for the five fiscal years 2063/064 to 2067/068. The break even point of Kantipur Publication is Rs. 333107235, Rs. 351095295, Rs. 374141667, Rs. 291270822 and Rs. 321071375 for the year 2063/064 to 2067/068 respectively. Break even point amount for the FY 2066/067 is low but breakeven point amount for the fiscal year 2065/066 is high comparatively within the five year break even point amount. Percentage of BEP on sales is 82.09%, 83.57%, 81.77%, 52.30% and 55.75% from year 2063/064 to 2067/068 respectively. Table 4.6 shows that the percentage of BEP on sales is fluctuating from 52.30% to 83.57%. The fluctuating percentage of BEP on sales indicates the fluctuating trend of profit. The graphical presentation of BEP in different year are shown in appendix-II.

#### 4.5.3 Margin of Safety

Kantipur Publication has Rs. 72684898 safety margin in 2063/064 which is 17.91% of actual sales. The margin of safety is 16.44%, 18.23%, 47.70% and 44.25% in remaining four years. Margin of safety is Rs. 265640597 in year 2066/067. Contribution margin of Kantipur Publication is very low and again fixed cost is low, it decreases BEP and the margin of safety becomes positive. Other income, which is non operating incomes of Kantipur publication is included in fixed cost and computed BEP and margin of safety. It has reduced the BEP volume and increased the safety margin and its percentage. It clearly indicates the greater amount of indirect incomes than indirect expenses, reduce the BEP level and increase margin of safety.

**Table No. 4.7: Margin of Safety**

<b>F/Y</b>	<b>2063/064</b>	<b>2064/065</b>	<b>2065/066</b>	<b>2066/067</b>	<b>2067/068</b>
MOS(Rs.)	72684898	690445933	83425187	265640597	254842045
MOS Ratio	17.91%	16.44%	18.23%	47.70%	44.25%

Table No. 4.7 shows that the margin of safety of company is in fluctuating trend. The MOS Rs. Where 72684898, 690445933, 83425187 265640597 and 254842045. The MOS ration were 17.91%,16.44%, 18.23%, 47.70% and 44.25% in the fiscal year 062/063, 063/064, 064/065, 065/066 and 066/067 respectively. Here the higher percentage of MOS ration indicates that the company is in strong profitability position.

#### 4.6 Analysis of Primary Data

The primary data is collected from personnel of administrative, sales, marketing and plant of the company. These are become very much helpful to know about the opinion of the managerial and about the budgeting system, especially sales budgeting system. The primary data collected in reference to different topics as per the purpose of study. A set of questionnaire was distributed among the 20 employee of Kantipur Publication. Out of them 25 respondents returned back the questionnaire fully answered, and they are kept in analysis.

To analysis the primary data, 25 questionnaires tried to fill. Twenty respondents filled out respondents filled out the questions and returned; some data are based on interaction with employees, which are converted into this analysis. On the basis of respondents the following analysis has been found.

**Table No. 4.8: Specific Objectives of Kantipur Publication**

S.N.	Options	No. of respondents	Percentage
1	Profit maximization	6	30
2	Business expansion	5	25
3	Customers satisfaction	6	30
4	Maximum capacity utilization	3	15
Total		20	100

Source: Opinion survey, 2069.

Table 4.8 illustrates that maximum respondents i.e. 30% were agreed on profit maximization and customer satisfaction are the major objectives of Kantipur Publication. Similarly business expansion objectives is said second objectives by 30% respondents. Maximum capacity utilization objective is found least since it is preferred least (15%).

**Table No. 4.9: Achievement of Company**

S.N.	Options	No. of respondents	Percentage
1	Ok	9	45
2	Good	5	25
3	Excellent	6	30
4	Bad	0	0
Total		20	100

Source: Opinion survey, 2069.

In the question of the achievement of the company, maximum respondents i.e. 45% said it is ok, 30% of the respondents said it is excellent and 25% said it is good. Similarly none of the respondents said it is bad.

**Table No. 4.10: Practicing Cost-Volume-Profit Analysis**

S.N.	Options	No. of respondents	Percentage
1	Yes	15	75
2	No	5	25
Total		20	100

Source: Opinion survey, 2069.

Table 4.10 depicts that maximum respondents i.e. 75% agreed on practicing of cost volume profit analysis in the company. Similarly only 25% said it is not in practiced in the company.

**Table No. 4.11: Major Difficulties in the Application of CVP Analysis**

S.N.	Options	No. of respondents	Percentage
1	Lack of knowledge	9	45
2	Costly	7	35
3	Lack of expertise	4	20
Total		20	100

Source: Opinion survey, 2069.

In the question of major difficulties in the application of CVP analysis, 45 percent respondents said lack of knowledge, 35% responded that it is very much costly and 20 percent agreed that it is lack of expertise.

**Table No. 4.12: Working Environment**

S.N.	Options	No. of respondents	Percentage
1	Ok	9	45
2	Good	5	25
3	Bad	2	10
4	Team work	4	20
Total		20	100

Source: Opinion survey, 2069.

In the question of working environment in the company, 45 percent of the respondents said it is ok, 25% agreed on good working environment, only 10 % responded that it is bad. Similarly 20 percent respondents said there is team work system.

**Table No. 4.13: Satisfaction to Work in This Company**

S.N.	Options	No. of respondents	Percentage
1	Yes	14	70
2	No	6	30
Total		20	100

Source: Opinion survey, 2069.

Table No. 13 shows that the satisfaction to work in the company. Out of 20 respondents 70% respondents agreed on satisfaction. But 30% respondents said there is not satisfactory working environment.

**Table No. 4.14: Wages Payment System**

S.N.	Options	No. of respondents	Percentage
1	Hour basis	8	40
2	Daily	2	10
3	By weekly	6	30
4	Monthly basis	4	20
Total		20	100

Source: Opinion survey, 2069.

In the question of wage payment system, 40 percent respondents were on hour basis, 30 percent were on weekly basis, 20 percent were monthly basis and only 10 percent were found on daily basis.

**Table No. 4.15: Differences of Wages for Blue Color and White Color Employee**

S.N.	Options	No. of respondents	Percentage
1	Not that much	6	30
2	A lot	14	70
Total		20	100

Source: Opinion survey, 2069.

Table No. 4.15 shows that blue color employee and white colour employee have different wage payment system. In the question of 'how much is the difference then', 30 percent respondents said it is not that much difference. But 70 percent respondents replied it is a lot.

**Table No. 4.16: Financial Position of the Company**

S.N.	Options	No. of respondents	Percentage
1	Poor	1	5
2	Good	8	40
3	Satisfactory	4	20
4	Very good	7	35
Total		20	100

Source: Opinion survey, 2069.

Table 4.16 shows that the financial position of the company. 40 percent respondents said that the financial position of Kantipur publication is good, 35 percent said it is very good, 20 percent said it is satisfactory but 5 percent said it is poor.

**Table No. 4.17: Measurement and Control the Overall Financial Performance**

S.N.	Options	No. of respondents	Percentage
1	Profit and loss	3	15
2	Budgeting control	5	25
3	Ratio analysis	12	60
Total		20	100

Source: Opinion survey, 2069.

In the question 'what are the measurement and control tools to measure overall performance of the company', 60 percent respondents said that ratio analysis is the

major tool, 25 percent said budgeting is the major tool whereas 15 percent said profit and loss is the major tool.

**Table No. 4.18: Major Problems of Kantipur Publication**

S.N.	Options	No. of respondents	Percentage
1	Political	13	65
2	Transportation	2	10
3	Raw materials	3	15
4	Others	2	10
Total		20	100

Source: Opinion survey, 2069.

Table No. 4.18 clearly shows the problems faced by Kantipur Publication. Majority of the respondents i.e. 65 percent said political system is the major problem, 15 percent said raw materials availability is the major problems, 10 percent of the respondents said transportation and others problems are major problems faced by Kantipur Publication.

**Table No. 4.19: Differences Product than Other Product**

S.N.	Options	No. of respondents	Percentage
1	Quality	16	80
2	Price	2	10
3	Cost	3	15
Total		20	100

Source: Opinion survey, 2069.

In the question, 'how your products are different from other company's products', 80 percent respondents said that quality is the difference. We have quality product. 15 percent respondents it is different in cost. Similarly, 10 percent replied that price is the difference.

**Table No. 4.20: More Effective for Employee Motivation**

S.N.	Options	No. of respondents	Percentage
1	Wages	12	60
2	Long-term benefit	4	20
3	Participation in decision making	2	10
4	Position	2	10
Total		20	100

Source: Opinion survey, 2069.

Table No. 4.20 shows that the more effective package for employee motivation. 60 percent respondents said wages is more effective for motivation, 20 percent said long-term benefit is more effective for motivation while 10 percent were agreed on participation in decision making and position is more effective for employee motivation.

**Table No. 4.21: Way of Promotion**

S.N.	Options	No. of respondents	Percentage
1	Television advertisement	4	20
2	Radio advertisement	3	15
3	People to people advertisement	1	5
4	Poster advertisement	1	5
5	Paper advertisement	2	10
6	Quality advertisement	6	30
7	Unique advertisement	3	15
Total		20	100

Source: Opinion survey, 2069.

In the question of 'what are the major ways of advertisement', majority of the respondents i.e. 30 percent said quality is the advertisement. Quality advertised itself, 20 percent replied television advertisement is appropriate, 15 percent respondents responded on radio advertisement while least 5 percent agreed on people to people advertisement and poster advertisement.

#### **4.7 Major Findings of the Study**

Every research work is done to find something new based on the objectives of the study on the basis of different analysis, observation and formal as well as informal discussion the following major findings have been drawn.

- Sales of the Kantipur Publication are increasing every year in fluctuating rate. Kantipur Publication forecasted sales for FY 2067/068 is Rs. 626368977.
- The company produces Saptahik, Kantipur daily, Kathmadu post, Nepal saptahik and Nari etc. Neapal Saptahik and was dropped after the fiscal year 2063/064.
- Total variable cost ratio was not constant. High portion of variable cost includes cost of materials. Variable cost covers nearly 80% on an average of sales.
- Fixed cost did not remain constant in the different fiscal year.

- Semi-variable cost also fluctuated each year.
- There is not proper coordination among production, administration distribution, store and sales department of Kantipur Publication.
- Profit of the company is fluctuated every year. Though sales decreased in the same year profit increased due to decrease in fixed cost.
- Contribution margins and P/V ratio were in increasing trend. It is very low due to the huge amount of variable cost.
- BEP decreased during the period due to the decrease in fixed cost and increase in P/V ratio.
- Margin of safety is in increasing trend. High MOS ratio indicates that the Company is in strong profitability position and the Company might be at lower risk.
- The Company's operating leverage decreased which indicates decreased in operating risk of the Company.
- The company has been practicing CVP analysis, but it makes more cost. According to the respondents the Kantipur Publication has good working environment and good relationship between employees and management.
- Majority of the respondents i.e. 75% agreed on CVP analysis is practiced in Kantipur Publication.
- Equal i.e. 30% respondents were agreed on the objective of profit maximization and customer satisfaction is the main objective of the company.
- Majority of the respondents i.e. 45% said CVP analysis practice is difficult due to lack of knowledge.
- About 45 percent of the respondents agreed that working environment in Kantipur Publication is ok.
- About 70 percent respondents were found satisfied with their job in Kantipur Publication.
- Majority of the respondents i.e. 65% said that political problem is the main problem of Kantipur Publication.

## **CHAPTER-V**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

This chapter is an accomplished specific and indicative enclosure which contains summary and conclusion of finding and recommendations. Brief introduction to all chapters of the study and genuine information of the present situation under the topic of the study is defined on summary. Conclusion is analysis of applicable data by using various financial and statistical tools, which presents strengths, weakness of the company. And suggestions are obtainable in recommendation, which is arranged on the basis from finding and conclusions.

#### **5.1 Summary**

A comprehensive profit planning and controlling is a systematic and formalized approach for stating and communicating the firm's expectation and accomplishing management in such a way as to maximize the case of a profit plan and to achieve the maximum profit from the resource available to an organization over the particular span of time. It serves basically as tool for management control. The effective operation of a business concern resulting into the excess of income over expenditure fully depends upon as to what extent the management to follow proper planning, effective coordination and dynamic control. Organization cannot achieve its goals without proper planning and implementation. So profit planning is one of the most important management tools for planning and controlling business operations. CVP analysis has become a powerful instrument in managerial decision making especially in the context of cost control and profit planning. The CVP analysis is a specific way of presenting and studying the interrelationship between cost volume and profit. The main purpose of this research is to examine CVP analysis as a managerial tool of profit plan and evaluate the present practice of CVP analysis and identify the area where CVP analysis could be applied to strengthen manufacturing firm. For this reason, Kantipur Publication has been randomly selected for the purpose. It has observed that Kantipur Publication has succeeded in living up to the expectation of general position. As per the nature of the study, secondary data with descriptive and analytical approach for sales analysis, cost analysis, profitability analysis and contribution analysis were used. And to support the study, primary data were

collected informally from employees of the company. From the analysis, the CVP analysis shows that the company has low contribution margin, low p/v ratio, low BEP and high margin of safety. The sales of the company were in fluctuating trend. The company has given more emphasis on domestic sales rather than export sales. Profitability position of the company is satisfactory. The trend of profit is increasing each year. The proportion of fixed cost on total cost is too low. The company has low operating risk and it is defined as non leverage organization. The company cannot make drastic change on profit with the change on sales due to the small amount of operating leverage.

## **5.2 Conclusion**

CVP analysis is not applied by Kantipur Publication and company has no clear cut boundaries to separate cost into fixed and variable. The classification of cost is not scientific and systematic. The Company does not recognize valuable product. It started to drop out product rather than to join new product line. The high variable cost and low fixed cost structure of Kantipur Publication indicates that the Company has lower operating risk. The Company has great stability in net income because its fixed costs are lower and it will not use net profit as rapidly as sales falls out.

The Company contribution ratio is low. BEP of the Company has decreased its main reason is due to decrease in fixed cost and increases in P/V ratio. Lower BEP and higher margin of safety indicates that the Company is in a low risk and further investment will be safe. Most of the Company also shows that small changes in sales revenue can change to the Company to get huge profit.

The Company is multi-product organization so it uses sales mix often important for CVP analysis. The Company's objective is that to get reason profit rather than to cover the maximum market shares which emphasis on high margin product to maximize overall profit of the Company. CVP analysis provides vision for planning, controlling and decision making process in profit planning. The company has been practicing CVP analysis, but it makes more cost. According to the respondents the Kantipur Publication has good working environment and good relationship between employees and management. According to 60% employee the company's financial

position is satisfactory. The company measure and control the overall performance at the end of the accounting year by profit and loss account.

### **5.3 Recommendations**

On the basis of the following summary and conclusion should be developed, implemented to improve the process of CVP analysis. Nepal has become member of WTO which helps the country to enter into the globalization. Foreign Companies may be established here and create top competition for the national Companies. Nepalese Companies should fit with the global environment with best fit managerial strategies. As the competition is very top in the context of globalization, company should provide attention towards cost minimization. For this CVP analysis tools can be preferable for the Kantipur Publication.

- Kantipur Publication should establish a separate cost control and planning department for effective management of cost.
- The expenses should be classified into variable and fixed, controllable and non-controllable. The effective and scientific method should be used to segregate the cost.
- Preparation of sales plan, production plan and selling price of its products should be based on BEP analysis.
- As a multi-product Company Kantipur Publication should produce for the product high with CVP to generate huge profit. Systematic approaches should be following towards comprehensive profit planning.
- Kantipur Publication should spent some money towards research, to develop new program and adopt the new technology that provides more competitiveness in the market.
- Systems of periodicals performance reports should be followed to take corrective action immediately.
- There are many new and popular management theory like, management by objective, participative management etc. This principle can be more effective to every organization. Kantipur Publication should apply this theory for better performance of the company.
- Margin of safety ratio of the company was satisfactory level but not sufficient. Higher the percentage of MOS ratio indicates, higher the possibility of good

position of the company. Therefore the management should ready to keep this position and ready to make more it.

- In CVP analysis only BEP tool is used in this company, so the company should recommend to use various tools of CVP analysis for the betterment of the company.
- Systems of periodicals performance reports should be followed to take corrective action immediately.
- Kantipur Publication should spent some money towards research, to develop new program and adopt the new technology that provides more competitiveness in the market.

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## Appendix -I

### Questionnaire

Dear sir,

First of all, I would like to introduce myself, as a student of Central Department of Management, going to research entitled “IMPACT OF COST VOLUME PROFIT ANALYSIS ON PROFITABILITY OF KANTIPUR PUBLICATION PVT. LTD.”

Please you are requested to tick (√) the answer as per your choices or either give order of performance, or subjective answers to the questions. Please fill them in order without missing any number.

Sovana Shrestha  
Researcher

1. What are the specific objectives of Kantipur Publication?
  - a. Profit maximization
  - b. Business expansion
  - c. Customers satisfaction
  - d. Maximum capacity utilization
2. What is the achievement of company?
  - a. Ok
  - b. Good
  - c. Excellent
  - d. Bad
3. If bad, what is the main cause of bad achievement?
  - a. Management
  - b. Political Situation
  - c. Competitive market
  - d. Quality of product
4. Are the companies practicing cost-volume- profit analysis?
  - a. Yes
  - b. No

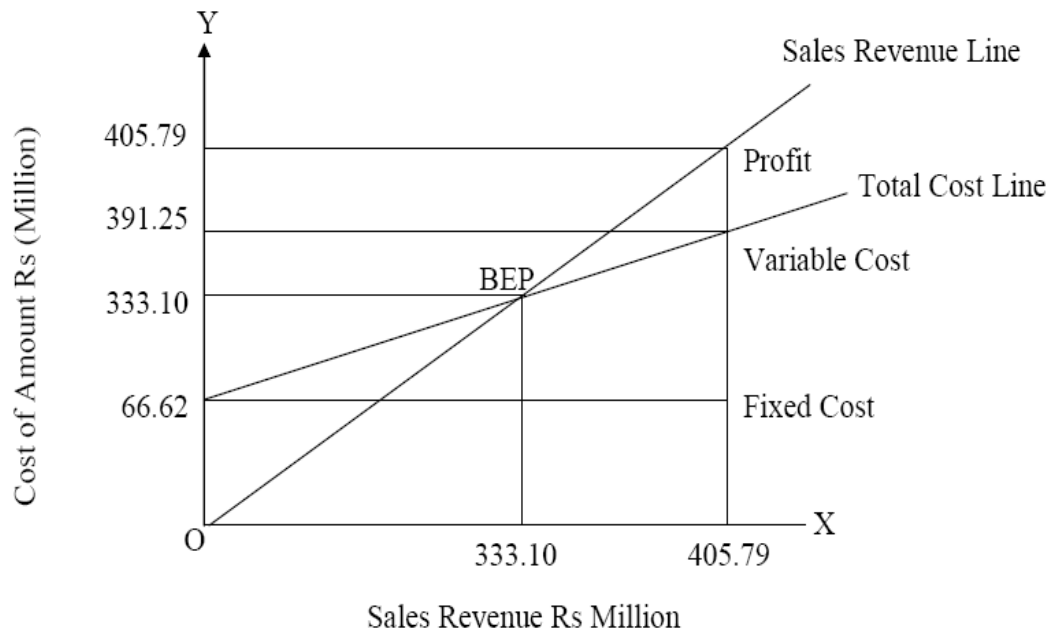
5. What are the major difficulties in the application of CVP analysis?
  - a. Lack of knowledge
  - b. Costly
  - c. Lack of expertise
6. What is the working environment?
  - a. OK
  - b. good
  - c. Bad
  - d. Team work
7. Are you satisfied to work in this company?
  - a. Yes
  - b. No
8. What is the wages payment system?
  - a. Hour basis
  - b. daily
  - c. By weekly
  - d. Monthly basis
9. What is the wages different blue color and white color employee?
  - a. Not that much
  - b. A lot
10. Would you mention the financial position?
  - a. Poor
  - b. Good
  - c. Satisfactory
  - d. Very good
11. How does the company measure and control the overall performance at the end of the accounting year?
  - a. Profit and loss account
  - b. Budgeting control
  - c. Ratio analysis
12. What are the major problems of Kantipur Publication?
  - a. Political
  - b. Transportation
  - c. Raw materials
  - d. Others .....

13. What are the differences your product than other product?
- a. Quality
  - b. Price
  - c. Cost
  - d. Test
14. Which element is more effective for employee motivation
- a. Wages
  - b. Long term benefit
  - c. Participation in decision making
  - d. Position
15. What is the way of promotion?
- a. Advertisement
    1. TV
    2. Radio
    3. People to People
    4. Poster
  - b. Paper advisement
  - c. Quality
  - d. Unique
16. Is the government supporting any technical or any others sectors?
- a. Yes, .....
  - .....
  - b. No.
17. What are the basic problems faced by the industry in formulating and implementing CVP analysis?
- .....
18. Which parts of CVP analysis are mostly practiced and which are not practiced till now?
- .....

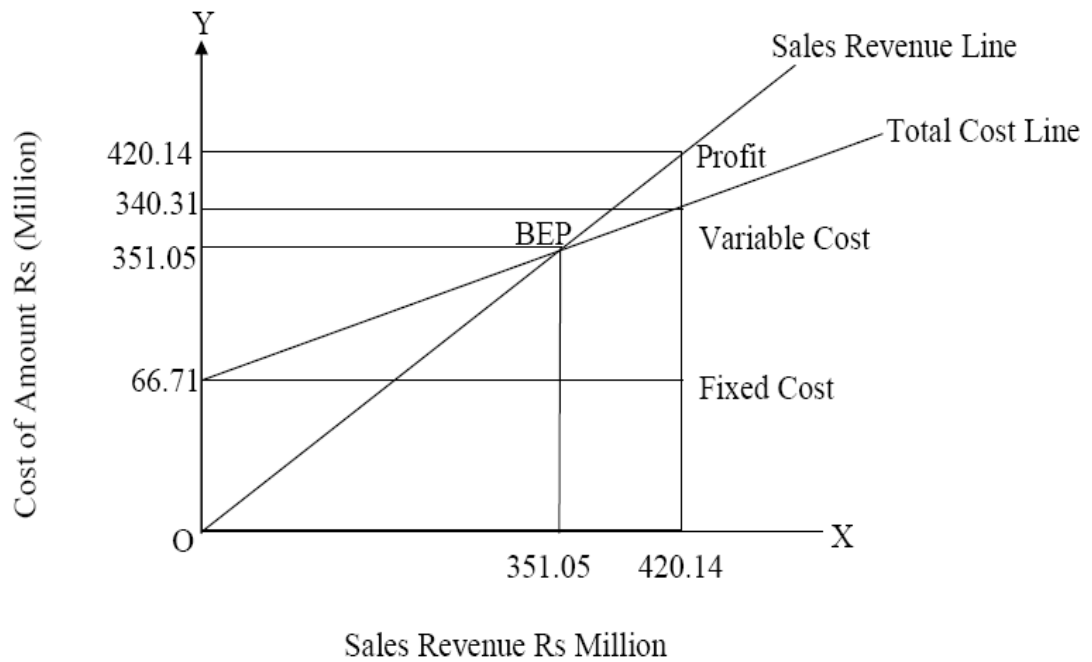
## Appendix-II

### Graphical Presentation

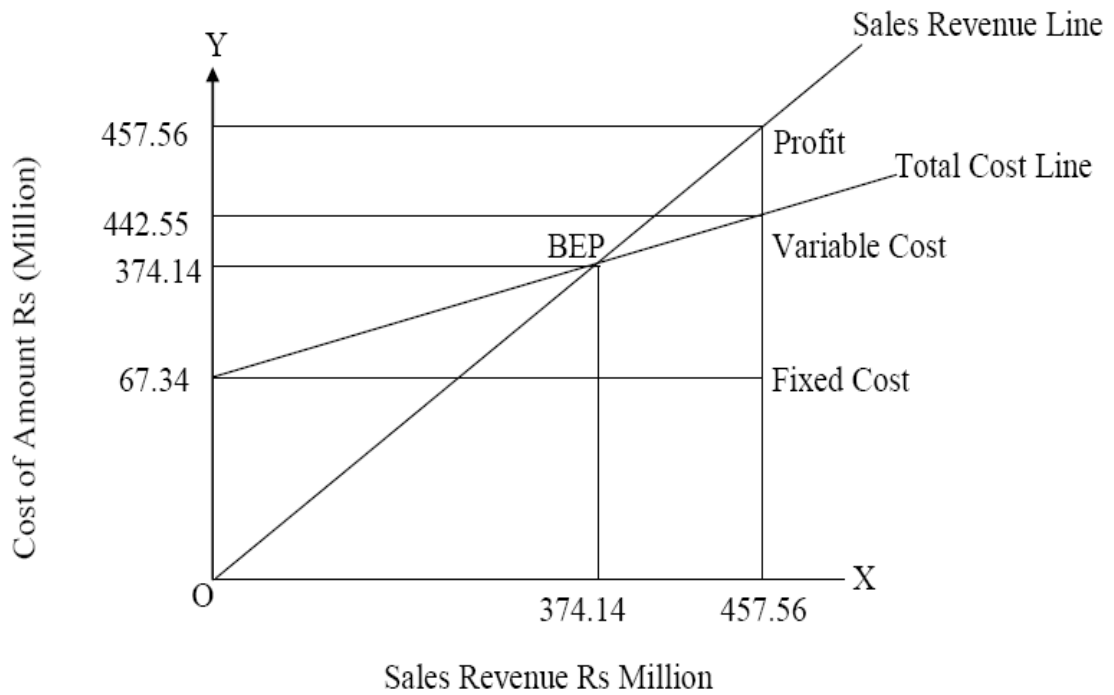
#### Graphical Presentation of BEP of KP of FY 2063/064



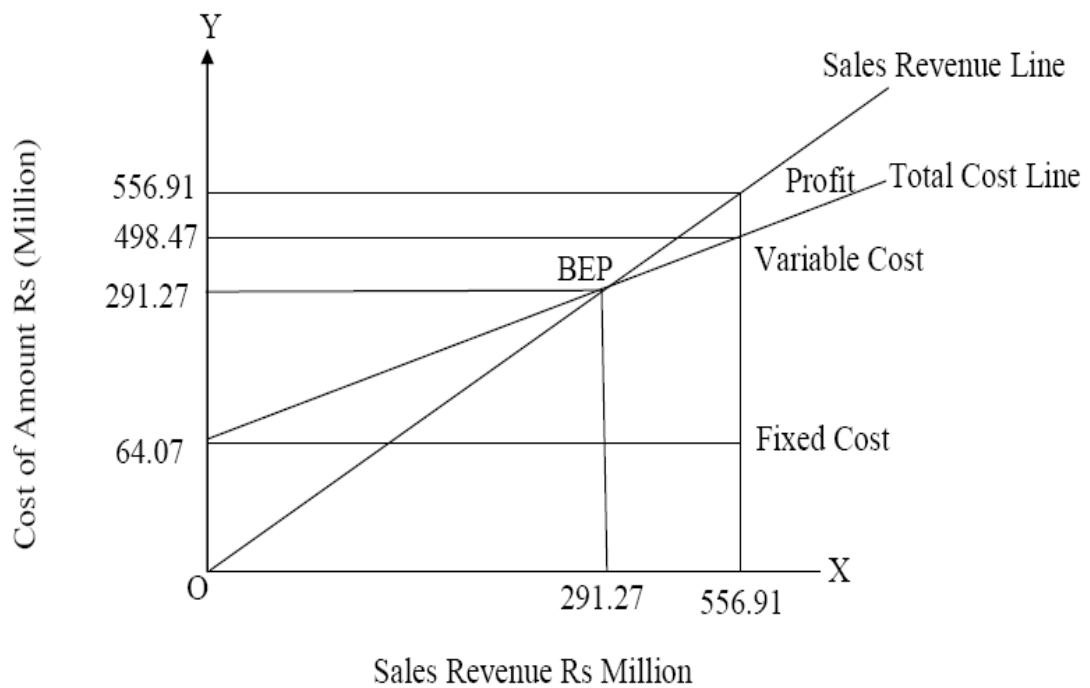
#### Graphical Presentation of BEP of KP of FY 2064/065



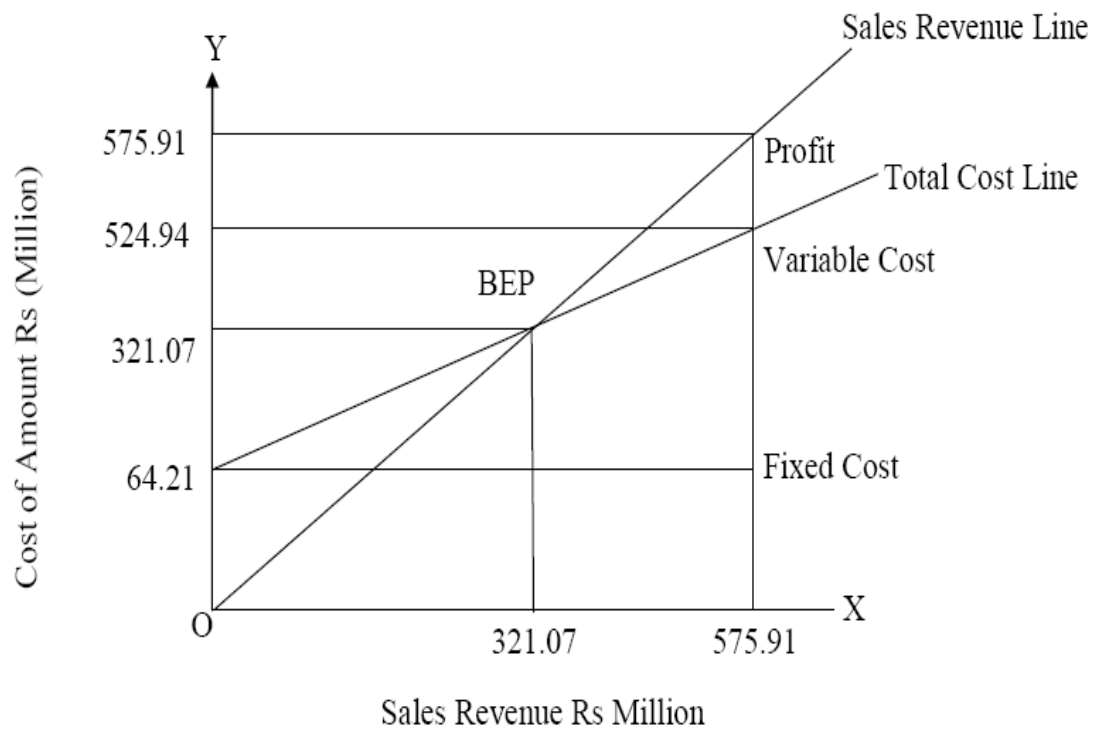
**Graphical Presentation of BEP of KP of FY 2065/066**



**Graphical Presentation of BEP of KP of FY 2066/067**



### Graphical Presentation of BEP of KP of FY 2067/068



### Appendix-III

#### Time Series Analysis of Kantipur Publication Pvt. Ltd.

Year	Sales(Y)	Time(X)	X <sup>2</sup>	XY
2063/064	405792133	1	1	405792133
2064/065	420139888	2	4	840279776
2065/066	457566854	3	9	1372700562
2066/067	556911420	4	16	2227645680
2067/068	575913420	5	25	2879567100
N=5	∑Y=2416323715	∑Y=15	∑X <sup>2</sup> =55	∑XY=7725985251

*Source: Unpublished records of Kantipur publication Pvt. Ltd., 2012.*

Straight line trend of actual sales (Y) depends upon time (X), which is expressed as  
 $Y = a + bx$ .

Substituting the value in equation (1) and (2)

$$\sum Y = na + b \sum X \text{ ----- (1)}$$

$$\sum XY = a \sum X + b \sum X^2 \text{ ----- (2)}$$

Here,

$$2416323715 = 5a + 15b \text{ ----- (3)}$$

$$7725985251 = 15a + 55b \text{ ----- (4)}$$

By solving

$$a = 340160511$$

$$b = 47701411$$

Thus,  $Y = a + bX$

Therefore if the trend does not change, possible sales of Kantipur Publication for the five year are as under:

$$2063/64: 340160511 + 47701411 \times 1 = 387861922$$

$$2064/65: 340160511 + 47701411 \times 2 = 435563333$$

$$2065/66: 340160511 + 47701411 \times 3 = 483264744$$

$$2066/67: 340160511 + 47701411 \times 4 = 530966155$$

$$2067/68: 340160511 + 47701411 \times 5 = 578667566$$

## Appendix-IV

### Sales Trend of Kantipur Publication Pvt. Ltd.

Details	Fiscal Year				
	2063/064	2064/065	2065/066	2066/067	2067/68
<b>In Units</b>					
Kantipur Daily	66719776	68972965	72108376	91009687	93177434
Kathmandu Post	21271057	23227734	23835073	28829880	30670738
Sapatahik	5548970	5951982	6104358	7330508	7620808
Nepal Saptahik	981450	1390464	1445495	1748443	1821494
Sarbottam Nari	443540	490163	499164	595766	642880
<b>Total</b>	94370263	100033307	103992467	129514284	133933354
<b>In Amount</b>					
Kantipur Daily	259869282	260906870	285247177	376472120	390930029
Kathmandu Post	83633759	87221041	94258772	82033052	72392317
Sapatahik	27226923	27939303	30199412	37869977	47973588
Nepal Saptahik	24144632	32602855	35644458	45221207	47743223
Sarbottam Nari	10794071	11469819	12217355	15315064	16874263
Total	405792133	420139888	457566854	556911420	575913420

*Source:- Unpublished records of Kantipur publication Pvt.Ltd., 2012.*

## Appendix-V

### Variable Cost of Kantipur Publication in different year (in Rs.)

Particulars	2063/064	2064/065	2065/066	2066/067	2067/68
Raw material	178338849	192407708	222583788	290031936	318615994
Printing materials	65593770	65900145	67376805	63714826	70382633
Lab chemical	1603298	1748216	1727610	1661498	1706455
Salary and wages	24726429	25669423	25645965	24579266	25175523
Fuel and Oil	1178896	1089468	1151740	1083585	1048251
Electricity cost	18437933	20041144	19704774	18998865	19063546
Water cost	188623	177355	200303	168558	170646
Launch cost	4762740	4991284	4982528	4767776	5290012
Miscellaneous	299280	617321	314486	302521	308768
Employee bones	701505	517336	596948	539262	591230
Operating allowance	1392554	1353516	135074	1310512	3442545
Fuel and moving cost	3417223	3318675	3311834	3212812	3442545
Distribution costs	23992606	22481718	27472965	24019491	13531670
Total	324633706	340313309	375204820	434390908	460730736

*Source:-Unpublished records of Kantipur publication Pvt.Ltd., 2012.*

## Appendix-VI

### Fixed cost of Kantipur Publication in different year (in Rs.)

Particulars	2063/064	2064/065	2065/066	2066/067	2067/68
Manufacturing wages and salary	8903933	9396464	9368441	8970096	9246856
Land and building	2175367	2492682	2385762	2340486	2465828
Provident fund subsidies	101994	113591	111113	107417	107880
Repairs	3425175	3141095	3369909	3113587	3082285
Miscellaneous	616531	632635	638108	606683	508577
Administration Salary	9232220	8755917	8849603	8525395	8630399
Launch cost	1336143	1341998	1319395	1286925	1387028
Provident fund	1870600	1374930	1588906	1438781	967067
Employees quarter	407010	300509	345939	313036	308229
Office repairs maintenance	18500	209944	193082	193232	173379
Printing and stationery	312452	337558	321804	316900	308229
Telephone wire and postage	1327921	1424329	1359621	1348759	1344647
Advertisement on TV	456344	370490	406277	374870	385286
License and insurance	1253919	1090888	1154471	1085964	1078800
Hospitality and pray cost	1500591	1576641	1520523	1499480	1464085
Vehicle repairs cost	447146	1202035	1303305	1213497	1213650
Advisor and auditing	612570	609250	603382	587425	577928
Bonus Commission	176782	230527	201127	208691	192643
Training and dress cost	374120	325208	345939	324630	327492
Technical and computer fee	3465750	3429092	3399052	3308131	3274928
Security cost	1739042	1658973	1673379	1615419	1618200
Donation and membership fees	328897	308742	313759	301442	300523
Depreciation	5961254	6240700	8592954	8183423	6164570
Interest	9044661	10287276	8646475	8428779	8722867
Miscellaneous	98668	90565	84474	96616	88614
Total fixed cost	66621447	66708106	67345500	64079581	64214275

*Source:-Unpublished records of Kantipur publication Pvt. Ltd., 2012.*