

**A STUDY ON MANAGEMENT ACCOUNTING PRACTICES IN
NEPALESE MANUFACTURING ENTERPRISES
(With Reference to Bottlers Nepal Limited)**

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RECOMMENDATION

This is to certify that the thesis

Submitted by
Basanta Bikram Bhandari

Entitled

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has been prepared as approved by this Department in the prescribed
format of Faculty of Management. This thesis is forwarded for
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VIVA-VOCE SHEET

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And found the thesis to be original work of the student and written according to the prescribe format of Faculty of Management, Tribhuvan University.

We recommend the thesis to be accepted as partial fulfillment of the requirements for the

Master in Business Studies (MBS)

Viva-Voce Committee

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DECLARATION

I hereby declare that this thesis entitled “A Study on Management Accounting Practices in Nepalese Manufacturing Enterprises (With Reference to Bottlers Nepal Limited)” submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my Original work done in the form of partial fulfillment of the requirement for the Master in Business Studies (MBS) under the supervision of supervisors Mr. Shanker Raj Joshi and Mr. Tek Bahadur Sijali of Shanker Dev Campus.

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Basanta Bikram Bhandari

CHAPTER I

INTRODUCTION

1.1 Background of the Study

"Management accounting relates to the provision of appropriate information for people within the organization for helping them to make better decision. Management accounting as an accounting discipline provides essential information to every hierarchy of management for discharging its function. It is the presentation of accounting information in such a way as to assist management in the creation of policy and in the day-to-day operation of undertaking. It provides information to management for planning, controlling and decision making which can be done in an ordinary manner. It furnishes data and statistical information required for the managerial decision-making that affects the survival and the success of the business. It provides information at periodical intervals to meet the varying requirements of the different levels of management. Management accounting is a technique for effective planning, for choosing among alternative business actions and controlling through the evaluation and interpretation of performance" (Chowdhary, 1982: 4).

"Management accounting is the term used to describe the accounting methods, systems, and techniques that coupled with special knowledge and ability assist management in its takes of maximizing profits and minimizing losses" (Batty, 1969: 1). "The main objectives of management accounting is to help mangers in overall managerial activities by providing information and helping them in planning, controlling and decision-making. In most corporate firms management accounting has been a strategic business partner in support of managements role in decision making, planning and controlling" (Hilton, 1997: 6). Management accounting is concerned with the accounting and fixation of responsibilities. The evaluation of further development, analysis and

interpretation of data provide a way to the management. In short it may be defined as the measurement analysis and communication of financial and economic data for the guidance of the management of make business decisions.

The main aim of management accounting is to help management in its functions- planning, directing, controlling and areas of specialization included with the bounds of management accounting. It supplies accounting information to the management for planning, formulating policies, controlling business operation and making decisions. Management accounting helps in operational accounting system by providing necessary knowledge to management of planning and decisions making and it also helps to motivate and monitor people in organization. During the 1950's the emphasis shifted from external users to the internal users of cost accounting data. As a result, the cost data used by management was accumulated in different manner from different sources of financial accounting. This shift in emphasis led to the emergence of the management accounting.

1.1.1 Introduction of the Company

Bottlers' Nepal Ltd Company is one of the manufacturing and processing company, which is manufacturing the soft drinks under the brand name of the Coca Cola Company. The company also makes the sales of the soft drinks under the registered trademark of the Coca Cola Company that is managed by Singapore based F & N Coca Cola Pvt. Company Ltd, its registered office is located at Balaju, Kathmandu. The company is located at Balaju in an area of 10,648 sq. m. of land and the buildings of the company covers 5,823 sq. m.

The company covers roughly 90% of the Nepalese market when compared with other brands of the similar products. The company has authorized share capital of Rs 500000 thousands and paid up value per share is Rs. 100. It has issued capital of Rs. 370,000 thousands number of shareholders. The paid of capital is Rs. 194,889 thousands and value per share is Rs. 100.

Bottlers' Nepal Ltd is one of the top ten companies listed in the NEPSE in terms of the market capitalization. In Nepal, there are two factories under Coca-Cola Company namely Bottlers' Nepal Balaju and Bottlers' Nepal Terai. the subsidiary company of Bottlers' Nepal, at Chitwan District of Nepal. Bottlers' Nepal (Balaju) Ltd distributes its product throughout the Bagmati Zone. Companies don't have policy of direct distribution. Company uses two types of distribution channel i.e. through the dealer & retailer to the consumers. This company is using two types of plant for production process. The old line has capacity of 220 bottles per minute and the recently installed can able to produce 430 bottles per minute. To maintain the leadership in the market the company always concentrates for its raw material from approved suppliers that are decided from head office. Raw material like concentrate Crown crakes, sugars are imparted from international and National market and CO₂ gas is produce in factory. The whole process i.e. raw material to finished good is prepared by company secretly and sold without disclosures After introducing new package, the company has increased sales effort. The company has its planning system but they don't forecast the sales. In last few years data we can see that sales has been increasing. The company has been able to increase the production efficiency of the plant giving better outputs as compared to the previous year. The newly installed line is now in full operation giving better yields and lower breakage rates. In order to stay ahead of the competition the company has been launching various types of promotional activities with financial and technical support from the Coca-Cola Company. The company is putting its full efforts into increasing the per capital consumption of its beverage in the market.

1.2 Statement of the Problem

Nepal's manufacturing is still in an early stage of development although its role is important in the industrial sector both in terms of its share and growth. The manufacturing sector contributes to national economy by providing employment opportunities, and by providing revenue to the government

through regular payments of tax. Therefore, manufacturing companies are chosen in order to know situation of practice of management accounting tools to help management in its functions, planning, directing, controlling and area of specialization included with the bounds of management accounting

There is the gap between the present research and the previous researches conducted on Management Accounting Practices in Nepalese Manufacturing Companies. They were either a case study of a particular company or a comparative study of two different companies. The findings of the previous researches were mostly based on the secondary data. The previous researches did not disclose which of the accounting tools are mostly practiced and which are not and why? Thus, to fill up these gaps the current research is conducted.

Profit does not just happen; profit has to be managed. The management plays and manages the profit. The quality and ability of the management are often judged by the size of the profit figure at the end of the accounting period. Management accounting provides techniques to aid management function. Lack of information, extra cost burden and cognizance about management accounting tools are the main factors causing problem in the application of management accounting tools. Lack of knowledge, lack of skilled manpower, lack of infrastructure development and extra cost burden are the main reasons behind not practicing new management accounting tools. Nepalese manufacturing sector is infant stage in practicing management accounting tools, which are indispensable for the success of a business, so there is lack of separate management accounting department and accounting expert. Some manufacturing companies still practice traditional method for evaluating investment proposal. Budget and plan is formulated by all companies according to their past events. In estimating cost and revenue for future period, companies take historical data for the base.

This study seeks to answer the following questions:

- Are the Nepalese manufacturing companies practicing management accounting tools or not?
- Which tools are mostly used and which are not practiced till now?
- What are the major difficulties in the application of management accounting tools?
- Can management accounting tools help to improve performance of Nepalese manufacturing enterprises?

1.3 Objectives of the Study

The main objective of this study is to examine the practice of management accounting tools in the Nepalese manufacturing enterprises. The specific objectives are:

- a) To explore the areas where management accounting tools can be applied to strengthen the companies.
- b) To analyze the present practice of management accounting tools in Nepalese Manufacturing Enterprises.
- c) To identify the problem faced by Nepalese Manufacturing Enterprises in applying management accounting tools.
- d) To analyze CVP, operating leverage and performance of profit and sales between Bottlers Nepal Balaju and Bottlers Nepal Terai Limited.

1.4 Importance of the Study

Management accounting is an integral part of the system of management control. This study is designed to describe the different types of management accounting tools used by the Nepalese Manufacturing Enterprises. Besides that, this study is significant in the following ways.

- It examines the application of management accounting tools in Nepal.

- It explores the prospects and challenges of manufacturing enterprise. It can be useful to the potential investors, lenders, policy makers and decision makers in Nepalese context.
- It provides information on the application of the management accounting tools which can encourage using those tools properly in decision making of those growth companies who have used previously and who have not yet used any tools for their better performance.
- It provides the knowledge to the management, which is necessary for planning and decision-making.

1.5 Limitations of the Study

Due to time and budget constraints, this study is carried only in few management accounting practitioner of Nepalese Manufacturing Enterprises. The present study has the following limitations.

- This study only concerned with management accounting. It doesn't concern other aspects of the companies.
- This is simply a partial requirement of MBS program. There are some limitations, which weaken the generalization e.g. inadequate coverage of industries, period taken, reliability of statistical tools used and their variations.
- The study is limited to the purposively selected Nepalese manufacturing industry and is confined only to the present practice of management accounting tools by Nepalese Manufacturing Enterprises.
- This study is focused only in manufacturing companies. So the findings may not be applicable for non-manufacturing and other types of enterprises.
- Time and budget constraints may limit the areas covered by the study.

1.6 Organization of the Study

The study is divided in to five chapters, they are given below:

Chapter I: Introduction

The introduction chapter deals with management accounting statement of the problem, objectives of the study, significant of the study, limitation of the study.

Chapter II: Review of Literature

The second chapter focused on review of literature. It contains the review of theoretical framework which, include meaning and definition of management, introduction of cost and management accounting innovations, evolution of management accounting etc. and review related studies.

Chapter III: Research Methodology

The third chapter deals on the methodology used in the study. It consists of research design, sources of data, data gathering procedure, research variables and data processing procedure.

Chapter IV: Data Presentation and Analysis

The fourth chapter deals with presentation, analysis and interpretation of data it consists of analysis of questionnaire, analysis with open-end opinions and major findings of the study.

Chapter V: Summary, Conclusion and Recommendations

The last chapter covers summary, conclusion and recommendation. Finally, bibliography and annexes with reference to the materials used in the study is also added to the end of this study.

CHAPTER II

REVIEW OF LITERATURE

This chapter presents the review of literature. The first part of this chapter includes the review of theoretical framework, related previous studies and the research gap.

2.1 Review of Theoretical Framework

A dynamic business environment, which creates many new facts of management problems, is characterized by the presence of large scale production, research expansion, product improvement and diversification, widening of the market and cut throat competition leaving a narrow margin of profit. The existence of tremendous industrial growth marked by the increased volume, product improvement, diversification, cut throat competition etc. demanded increased operating efficiencies by modern techniques of control and supervision. Therefore, the need has been felt for strategic planning, strategic choice, cost management and control.

2.1.1 Meaning and Definition of Management Accounting

"Management Accountancy is the term used to describe the accounting methods, systems and techniques which coupled with special knowledge, ability, assist management in its task of maximizing profits and minimizing losses" (Batty, 1982: 1).

"Management accounting is that branch of the accounting information system of business enterprises, which uses accounting information for planning, controlling and decision making. It uses partly financial accounting but mostly cost accounting" (Khan and Jain, 1993: 9).

"Management accounting is considered with the provision of information to people within the organization to help them make better decision and improve the efficiency and effectiveness of existing operations" (Drury, 2000: 5).

"Management accounting is the presentation of accounting information to formulate the policies to be adopted by the management and its day to day activities. It helps the management to perform all its functions including planning, organizing, staffing, directing and controlling. It presents to management the accounting information in the form of processed data which it collects from financial accounting" (Giri, 1994: 1).

"Management Accounting' is used to describe the modern concept of accounts as a tool of management in contrast to the conventional annual or half yearly account presented mainly for information of proprietors, the object being to so expand the financial and statistical information as to shed light on all phases of the activities of organization" (Jain and Narang, 1997: 7).

2.1.2 Historical Overview of Introduction of Cost and Management Accounting Innovations

2.1.2.1 Introduction of Cost and Management Accounting Techniques before 1950s

"Management accounting systems (MAS) first appeared in the United States during the nineteenth century. These MAS employed both simple and sophisticated accounting methods. For example, the early management accounting measures were simple but seemed to satisfy the needs of business owners and managers. Simple managerial accounting procedures created during the nineteenth century were used to monitor and evaluate the output of internally directed processes. Cost accounts were used to ascertain the direct labour and overhead costs of converting raw materials into goods" (Chandler, 1977:21). The use of sophisticated accounting procedures also dates back to the nineteenth century. According to Porter (1980:11), some companies in the USA

used sophisticated sets of cost accounts as early as the first quarter of the nineteenth century. During this period, new accounting systems were devised to control and record the disbursements of cash which provided management with timely and accurate reports on expenditures. "A voucher system of bookkeeping which is used for controlling and recording disbursements was also created during the nineteenth century" (Wood, 1895:35). "In comparison, before the industrial revolution, accounting was mainly used as a record of the external relations between business units. Information for decision-making and control was usually acquired from market prices" (Graner, 1954:21).

These techniques had a substantial impact on twentieth century accounting practices. Some of these techniques provided the basis for the development of standards to monitor labour and material efficiencies and costs.

"During the nineteenth century scientific management experts also developed new cost accounting procedures to evaluate and control physical and financial efficiency of tasks and processes in complex machine-making firms and to assess the overall profitability of the enterprise" (Johnson & Kaplan, 1987:45). Around the 1900s managers started paying attention to the productivity and performance of capital. "The design of Du Pont management accounting procedures during that period facilitated the evaluation of the performance of capital; these gave significant attention to the application of return on investment. Such information helped managers in the allocation of new investments among competing economic activities and the financing of new capital requirements" (Chandler & Salsbury, 1971:23).

Most of cost and management accounting procedures were developed during the nineteenth and first quarter of the twentieth century. They further stated that before World War I some organisations were trying to develop and use accurate cost accounting systems to trace costs accurately to diverse lines of products. This evidence confirms that even the idea and logic behind activity based costing for designing an accurate costing method is not new.

The application of non-accounting information (financial and non-financial) in management accounting, which has attracted considerable attention in the last two decades is not new either. According to Johnson (1992:24), as far back as the first half of nineteenth century, businesses owners and managers were using non-financial information to control organisational operations. The idea of paying more attention to the working people and customers of organisations as a long-term source of profit also dates back to before the 1950s.

2.1.2.2 Introduction of Cost and Management Accounting Techniques after 1950s

- Cost and management accounting innovations in 1960s can be identified as: Computer technology, Opportunity cost budgeting, Zero-base budgeting, Decision tree, Critical path scheduling, and Management by objectives.
- Cost and management accounting innovations in 1970s can be identified as: Information economics and agency theory, Just-in-time scheduling, Strategic business units, Experience curves, portfolio management, Materials resource planing, Diversification, Matrix organisation and Product repositioning.
- Cost and management accounting innovations in 1980s can be identified as: Activity based costing, Target costing, Value-added management, Theory of constraints, Vertical integration, Private labels and Benchmarking.
- Cost and management accounting innovations in 1990s can be identified as: Business process reengineering, Quality functional deployment, Outsourcing, Gainsharing, Core competencies, Time-based competition and Learning organisation.

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2.1.3 Evolution of Management Accounting

In 1998 the International Federation of Accountants (IFAC) issued a statement, describing the development of management accounting through four sequential stages.

Stage 1 - cost determination and financial control (pre 1950)

IFAC describes management accounting before 1950 as a technical activity necessary for the pursuit of organizational objectives. It was mainly oriented towards the determination of product cost. The focus on product costs was supplemented by budgets and the financial control of production processes. Accordingly, management was concerned primarily with internal matters, especially production capacity. The use of budgeting and cost accounting technologies was prevalent in this period. However, the dissemination of cost information tended to be slight, and its use for management decision-making poorly exploited (Ashton et al., 1995:12).

Stage 2 - information for management planning and control (by 1965)

"In the 1950s and 1960s the focus of management accounting shifted to the provision of information for planning and control purposes. In this stage management accounting is seen by IFAC as a management activity, but in a staff role. It involved staff (management) support to line management through t Most of cost and management accounting procedures were developed during the nineteenth and first quarter of the twentieth century. They further stated that before World War I some organisations were trying to develop and use accurate cost accounting systems to trace costs accurately to diverse lines of products. This evidence confirms that even the idea and logic behind activity based costing for designing an accurate costing method is not new.

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"The world recession in the 1970s following the oil price shock and the increased global competition in the early 1980s threatened the Western established markets. Increased competition was accompanied and underpinned by rapid technological development which affected many aspects of the industrial sector. The use, for example, of robotics and computer-controlled processes improved quality and, in many cases, reduced costs. Also developments in computers, especially the emergence of personal computers,

markedly changed the nature and amount of data which could be accessed by managers" (Ashton, 1995:19).

"The challenge of meeting global competition was met by introducing new management and production techniques, and at the same time controlling costs, often through reduction of waste in resources used in business processes" (IFAC, 1998:25). In many instances this was supported by employee empowerment. In this environment there is a need for management information, and decision making, to be diffused throughout the organization. The challenge for management accountants, as the primary providers of this information, is to ensure through the use of process analysis and cost management technologies that appropriate information is available to support managers and employees at all levels.

Stage 4- Creation of value through effective resources use (by 1995)

"In the 1990s world-wide industry continued to face considerable uncertainty and unprecedented advances in manufacturing and information-processing technologies" (Ashton, 1995:21). "For example the development of the world-wide web and associated technologies led to the appearance of E-commerce. The focus of management accountants shifted to the generation or creation of value through the effective use of resources. This was to be achieved through the use of technologies which examine the drivers of customer value, shareholder value, and organizational innovation" (IFAC, 1998:27).

2.1.4 Growth and Contribution of Manufacturing Firms in Nepalese Economy

Nepal's manufacturing is still in an early stage of development although its role is important in the industrial sector both in terms of its share and growth.

"It rose from 6% in the beginning of seventh plan (1987/88) to 10% in the year 2000/01 averaging 0.03% growth per annum over last 14 years. A sharp increase in the manufacturing production by 25% per annum during 1990/91-1994/95 period witnessed following widespread policy reform. But this sudden growth slowed down then after. The major cause of stagnation and decline of Most of cost and management accounting procedures were developed during the nineteenth and first quarter of the twentieth century. They further stated that before World War I some organisations were trying to develop and use accurate cost accounting systems to trace costs accurately to diverse lines of products. This evidence confirms that even the idea and logic behind activity based costing for designing an accurate costing method is not new.

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The 1996 renewed trade treaty with India which provided improved access for Nepal's manufacturers to Indian market, was the catalyst for the recent higher growth in the sector in recent years. To take the immediate advantage, some industries came into being under India Joint Venture as well. Industries flourished to take benefit from this advantageous situation are vegetable ghee, toiletry products tooth paste, herbal products, acrylic yarn, copper rod, zinc oxide, noodles, biscuits, MS pipe etc. whose growth in terms of production and export to India was due to the different in prevailing tariff between Nepal and India on their imports from third countries. Now, these items have been the issue of trade dispute between Nepal and India as the latter blames that export surge of these low value added items from Nepal to India has incurred substantial damage to similar types of Indian products. In counter offence,

India government has already placed many restrictions on these products of Nepalese origin including anti dumping duties.

Production and exports of exportable products viz. carpets, pashamina and readymade garments produced for overseas market are also in decline due to several reasons including decreasing preferential treatment by importing countries, quality degradation, increasing international competition price, incompetence and use of child labour.

"On the contrary survey of labour force 1998/99 disclosed 0.55 million labour force in manufacturing activities contributing by 5.8 percent to the total labour forces of 9.5 million. In GDP, manufacturing sector contributed around 10%" (Decostor, 1976: 67).

Manufacturing sector contribute in national economy by providing employment opportunities and by providing helping hand to the government through regular payment of tax and come in the main stream of government in alleviating poverty through different measures.

2.1.5 Constraints to Industrial Development in Nepal

Nepal Government initiated various policy reforms to shift industrial strategies toward greater market orientation, but manufacturing firms were facing various types of obstacles while doing business in Nepal. Recently, the World Bank Most of cost and management accounting procedures were developed during the nineteenth and first quarter of the twentieth century. They further stated that before World War I some organisations were trying to develop and use accurate cost accounting systems to trace costs accurately to diverse lines of products. This evidence confirms that even the idea and logic behind activity based costing for designing an accurate costing method is not new.

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- Because of the unrestricted entry of India products into Nepal across the open boarder between two countries, Nepalese industrial products have been facing stiff direct competition with Indian industrial products. Unrestricted import from India with free convertibility between Nepal's and Indian currencies has denied import restrictions and foreign exchange control product against foreign competition. Although tariffs are considered as the principal means of protecting Nepalese industries, this has not been observed as fully effective due to leakage across the 500 miles open boarder with India and the under-invoicing of goods to avoid duties at the customs check-ports.
- Liberalization and open market policy in Nepal have not been followed up, with the contingency measure like antidumping, safeguards or countervailing action against unfair trade. Neither had it followed the policy with appropriate market monitoring nor made corrections mechanism to salvage the industry sector and the economy at large from unfair competition. The hardest hits are on the cottage had small industry sector, which are facing stiff competition from dumped and cheaper quality of foreign products. Thus, the products of the weak and the small local manufacturing units tend to be displaced by foreign made items in home market.
- Nepal introduced one window system (service) to investors along with the adoption of liberal and open industrial and foreign investment policy in 1992 with a view to provide prompt services and facilities from a single place i.e. Department of Industry without any hurdle and within

specified time. However, one window system (OWS) objective of streamlining the provisions of government services to industrial firms never seems to have materialized. The service appears to be limited to an entry point for administrative job only. Though one window, firms have to move their files through the Department of Industry, the department of customs, FNCCI and the Department of Finance, which finally releases the tax refunds after receiving approvals from each agency. Firms that have used the service describe it as “simply one more window of the government bureaucracy to deal with

2.1.6 A Brief Review of Management Accounting Tools

"Management accounting is concerned with the provision and interpretation of information which assists management in planning, controlling, decision making and appraising performance" (Lucey, 2003: 9).

Tools and techniques provided by management accounting to discharge functions like, planning controlling and organizing can be identified as such.

A. Cost Concept

"Cost is a foregoing or sacrifice measured in monetary terms, incurred or potentially to be incurred to achieve a specific purpose" (Pandey, 1999: 91).

B. Cost Classification in a Manufacturing Firm

"It is the process of grouping costs according to their common characteristics. The same cost figures sometimes can be classified according to direct ways of costing depending up on the purpose to be achieved and requirements of particular concern. The important ways of classification are": (Jain and Narang, 1997: 197-198)

- By nature or element
- By Function

- By Direct or Indirect
- By variability
- By controllability
- By Normality
- By Capital or Revenue
- By Time
- According to Planning and Control
- For Managerial Decision

"In management accounting with the purpose of managers in managerial task, costs are classified on the following ground": (Garrison, 1985: 27)

(I) Cost relating to Income Measurement

a) Product Cost

"Those cost which attach or cling to units of finished goods are called product cost. Traditionally, in cost accounting product cost will consist of: direct materials, direct labour and a reasonable share of factory overhead" (Pandey, 1999: 198).

b) Period Cost

Period cost do not attach to products. They are incurred for a time period and are charged to profit and loss on that period. Non-manufacturing cost, selling and general and administrative costs- are generally treated as period cost.

c) Absorbed Cost and Unabsorbed Cost

"Fixed Cost helps to create value in the product. The benefit of fixed cost will lapse with the passes of time and must be absorbed by the revenue of that period. The part of fixed cost which is absorbed during the revenue of the particular period is known as absorbed cost. Absorbed cost is those cost which

have been charged to production. Cost which remains unchanged is known as unabsorbed cost" (Horngren, 1978: 263).

d) Expired Cost and Unexpired Cost

Expired cost is the monetary value of the resources that have already been used in producing revenue. It does not have a future revenue producing potential.

"Unexpired cost which still has a potential of generating revenue in future: an unexpired cost represent the monetary value of an unused resource" (Pandey, 1999: 192).

e) Joint Product Cost and Separable Cost

"Joint Product Costs are the costs of a single process or a series of processes that simultaneously produce two or more products of significant sales values. Such costs are attributable to different individual products until after a certain stage of production known as the split off point. Separable cost, in contrast, refers to any cost that can be attributed exclusively and wholly to a particular product, process, division or department" (Horngren, 1978: 118).

(II) Cost Relating to Profit Planning

Profit planning is concerned with decision making. Cost volume profit relationship is an integral part of profit planning, that is how the cost and profits vary with sales volume. Planning deals with future. The future costs are relevant costs. The relevant cost concepts are:

a) Fixed variable and Semi-Variables Cost

"Fixed costs remain constant over wide ranges of activity for a specified time period. Fixed cost thus remains constant whether activity increases or decreases with in a relevant range. Variable cost varies in direct proportion to the volume

of activity. Double the level of activity double will be the total variable cost" (Drury, 2000: 26).

Most of cost and management accounting procedures were developed during the nineteenth and first quarter of the twentieth century. They further stated that before World War I some organisations were trying to develop and use accurate cost accounting systems to trace costs accurately to diverse lines of products. This evidence confirms that even the idea and logic behind activity based costing for designing an accurate costing method is not new.

The application of non-accounting information (financial and non-financial) in management accounting, which has attracted considerable attention in the last two decades is not new either. According to Johnson (1992:24), as far back as the first half of nineteenth century, businesses owners and managers were using non-financial information to control organisational operations. The idea of paying more attention to the working people and customers of organisations as a long-term source of profit also dates back to before the 1950s. It is part influenced by the changes in activity" (Khan and Jain, 1993: 152).

b) Methods of Mixed Cost Segregation

Two Point Method (High-Low Method)

"As the name suggest, this method makes use of two observations rather than all the observations for drawing the cost line. The two points chosen are high cost point and low cost point corresponding to some specific volume" (Khan, 1994: 154).

$$\text{Variable rate} = \frac{\text{Difference in Cost}}{\text{Difference in Production}}$$

Least Square Method

"It is located by means of solving the two linear equations based on the formula for drawing a straight line regression equation. It is used to segregate mixed cost in to fixed and variable" (Khan and Jain, 1993: 157).

$$Y = a + bx$$

Where, y = Total cost

a = Fixed elements of Mixed cost

b = Variable cost to volume ratio

x = Any measure of volume

c) Analytical Method

"This method is also known as degree of variability technique because the genesis of the method lies in measuring the extent of variability of cost with volume. In other words, the technique is based on a careful analysis of each item to determine how far the cost varies with volume" (Khan and Jain, 1993: 156).

Variable overheads = (Budgeted Mixed Overheads × degree of variability)

d) Graphic Method (Scatter Diagram)

The graphic method of dividing mixed costs in to their fixed and variable components makes use of all relevant past data pertaining to cost-volume relationship. Under this method, the data are plotted on a scatter graph.

e) Future Cost

"Future costs are relevant costs in the profit planning function of management. Those costs which are reasonably expected to be incurred at some future date as a result of a current decision are called future costs. Since they deal with a

future period, they are estimated costs based on expectations" (Khan and Jain, 1993: 158).

f) Budgeted Cost

"When an operating plan involving future costs is accepted, and incorporated formally in the budget for a specific period, such costs get converted to what may be referred to as budgeted costs. Budgeted costs are important element in that they provide the basis for measuring the important input of responsibility accounting" (Khan and Jain, 1993: 159).

(III) Cost for Control

a) Responsibility Cost

"Cost which is incurred due to the responsible person of the responsibility center is responsibility cost. This helps to localize the responsible person for the cause of cost when actual cost equal to budgeted cost. For e.g.: purchase manager will be responsible for the purchase cost will be accountable in case actual cost equal budgeted cost. The budgeted cost is prepared by the head of management known as manager, and over which he has control or incur" (Khan and Jain, 1993: 160).

b) Controllable and Non Controllable Cost

Cost that is responsibly subject to regulation by the manager, with whose responsibility that cost is being identified for such cost the manager of the responsibility center should be made responsible is controllable cost.

Cost that is not subject of regulation by the manager of the responsibility center is classified as non controllable cost. For uncontrollable cost, manager or responsibility center should not be made responsible.

c) Direct and Indirect Cost

Direct cost is a cost that can be easily and conveniently traced to the particular cost object under consideration.

Indirect cost is a cost that cannot be easily and conveniently traced to the particular cost object under consideration. It is also known as common costs.

(IV) Cost of Decision Making

a) Relevant/Irrelevant Cost

Any costs that are affected by the decision are relevant cost. Irrelevant costs are those costs that are not affected by decision. Costs that remain unchanged for all the alternative courses of action are irrelevant cost. Such cost might be ignored while taking decision.

b) Differential Cost

Any cost that is present under one alternative but is absent in whole or in part under another alternative is known as differential cost. Differential cost is also known as incremental cost. Any cost which increases between the alternatives are incremental cost while which decreases is decremental cost. Both incremental and decremental costs are relevant in decision making purpose (Garrison, 1985: 43).

c) Out of Pocket Cost and Sunk Cost

Out of pocket cost is that cost involves the cash out flows due to a particular management decision and a sunk cost is a cost that has already been incurred and that cannot be changed by any decision made now or in the future. Sunk costs are always results of decision taken in the past.

d) Opportunity Cost

Opportunity cost is the potential benefit that is given up when one alternative is selected over another. It is not usually entered in the accounting records of an organization. But it is a cost that must be explicitly considered in every decision a manager makes. Virtually every alternative has some opportunity cost attached to it.

C. Cost Allocation and Apportionment Methods

There are two popular methods of allocating the cost of service department.

a) Step Method

It provides for allocation of a departments cost to other service departments as well as to producing departments in a sequential manner. The sequence begins with the department that provides that greatest amount of service to other department. After its costs have been allocated, the process continues step by ending with the department providing the least amount of services other service departments.

b) Direct Method

"Direct method of cost allocation ignores the cost of services between departments and allocates all service department costs directly to producing department" (Horngren, 1996: 328).

D. Product Costing Method

There are two popular methods for product costing. They are variable costing and Absorption costing.

a) Variable (Direct/Marginal) Costing

"Variable Costing is a method of recording and reporting cost which regards as product costs only those manufacturing costs which tend to vary directly with volume of activity. Conventional costing, it will be recalled, considers all manufacturing costs fixed as well as variable as product costs" (Lynch and Williamson, 1992: 256).

b) Absorption Costing

"Under absorption costing fixed manufacturing cost is also included in the cost of product. It absorbs all cost necessary to production. Absorption costing signifies that fixed factory overhead is inventoried" (Horngren, 1978: 488).

E. Use of Variable and Absorption Costing

Variable costing is used for internal management purposes are undoubtedly recognized by all. Like many other costing techniques, it suited to the decision making needs of management. The decision making potentialities of variable costing have been appreciated by top management and executives in the area of production, marketing and finance.

Absorption costing is much more widely used than variable costing. All firms used absorption costing for external reporting purpose or tax purposes.

F. Cost-Volume-Profit Analysis

Cost-Volume-Profit Analysis is a management accounting tool to show the relationship between the ingredients of profit planning. Cost-Volume-Profit Analysis is also called as break even analysis.

"Break-even analysis is very much an extension, or even a part of marginal costing. Basically it is concerned with finding the point at which revenues and costs agree exactly-hence the term "break even". The break even point is,

therefore, the volume of output at which neither a profit is made nor a loss is incurred" (Batty, 1982: 252). Cost volume profit (CVP) analysis is the process of examining the relationship among revenue cost and profit for a relevant range of activity for a particular time from. It is one of the most important and powerful tools that managers have at their command in short term planning.

Planning controlling and decision making are the essential managerial functions. Cost volume profit analysis helps managers to plan for profit to control cost and make decision.

i) Profit Volume (P/V) Ratio

P.V. ratio is a guide to the profitability of a business. This ratio shows the relationship between the contribution and the value of sales. Management has to aim at increasing the P.V. Ratio. This may be done by reducing variable cost or by rising prices.

ii) Break Even Point

BEP is a point at which revenues and costs agree exactly. BEP is that volume of output at which neither a profit is made nor a loss is incurred. That point at which total expenses (fixed and variable) associated with a certain level of sales is exactly matched by revenues generated by the level of sales leaving no profit.

iii) Margin of Safety

"The excess of actual or budgeted sales over the break even sales is known as the margin of safety" (Horngren, 1973: 57).

"The margin of safety indicates the extent to which sales may fall before the firm suffers a loss. Larger the margin of safety, safer will the firm. A high Margin of safety is particularly significant in times of depression when the demand for the firm's product has been falling to low Margin of safety may

result for a firm which has a low contribution ratio. When both the margin of safety and P/V ratio are low. Management should think of the possibilities of increasing the selling price, provided it doesn't adversely affect the sales volume or reducing variable cost by bringing improvement in the manufacturing process" (Pandey, 1999:239).

iv) Operating Leverage

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

Operating leverage refers to the use of fixed costs in the operation of a firm. A firm will not have operating leverage if its ratio of fixed costs to total cost is nil. For such a firm a given change in sales would produce same percentage change in the operating profit or earning before interest and taxes (EBIT). It would have operating leverage, and the percentage change in the operating profit would be more for a given change in sales.

Operating leverage refers to the used of fixed costs in the operation of firm, and it accentuates fluctuations (increases or decrease) in the firms operating profit due to change in sales. Thus the degree of operating leverage (DOL) may be defined as the percentage change in operating profit (earning before interest and taxes, EBIT) on account of change in sales.

$$DOL = \frac{\Delta EBIT}{\Delta Sales}$$

Where, Δ - Change

EBIT - Earning before interest and taxes.

$$\text{Alternatively, DOL} = \frac{\text{Contribution}}{\text{EBIT}}$$

Degree of operating leverage may be defined as the percentage change in operating profit resulting from a percentage change in sales.

G. Budgeting

"Budgeting is a comprehensive plan of action prepared for achieving objectives. A Budget is the detail plan outlining the acquisition and use of financial and other resources over some given time period. It represents the plan for the future expressed in formal quantitative terms. The act of preparing a budget is called budgeting. The use of budget to control is called budgeting. The use of budget to control firms activities are known as budgetary control" (Garrison, 1985: 297).

H. Planning Process

Planning is the continuous process. Business conditions do not remain static, they change rapidly and therefore plans should be revised and reformulated to adapt to the changed conditions. Planning process involves the following four fundamental steps.

a) Objectives

Objectives are statements of broad and long-range desired state of the enterprise in the future. They represent purposes to which efforts of the enterprises should be focused. They direct to motivate individual for attaining the organizational goals. Long range objectives are generally the qualitative expressions of the future intentions.

b) Goals

Goals represent the operational specifications of the broad objectives with time and quantity dimension. Goals are the quantified targets to be attained within a specified period.

c) Strategies

Strategies lay down the foundation for attaining the objectives and goals of the enterprise. Strategies specify the ways to achieve the goals operationally.

d) Budget

"A budget or a profit plan is the formal expression of the firms' targets, stated in financial terms generally for one year. It is called the budget or the profit plan because it explicitly states the goals in terms of time expectation and expected financial results for each major segment of the entity" (Pandey, 1999: 11).

I. Elements of Budget

Budget is a comprehensive and coordinated plan, expressed in financial terms, for the operations and resources of an enterprise for some specific period in the future. The basic elements of a budget are:

a) Integrated Plan

A budget is the plan of the firm's expectations in the future. Planning involves the control and manipulation of relevant variables- controllable and non-controllable and reduces the impact of uncertainty. It makes active to influence the environment in the interest of the enterprise.

b) Financial Quantification

For, operational purposes, a budget are always quantified in financial terms. Initially the budget may be developed in terms of varieties of quantities, but finally they must be expressed in the monetary terms.

c) Operation and Resources

A budget is a mechanism to plan for the firm's all operations or activities. The two aspects of every operation are: revenue and expenses. The budget must plan for the quantify revenues and expenses related to a specific operation. Planning should not only be done for revenue and expenses, but the resources necessary to carry out operations should also be planned.

d) Time Element

"Time dimension must be added to a budget. A budget is meaningful only when it is related to a specified period of time. The budget estimates will be relevant only for some specific period" (Pandey, 1999: 285-286).

e) Comprehensiveness

"Budget must be in comprehensive terms i.e. all the activities and operations of an organization are included in it. Budgets are prepared for each segment of an organization. Those are integrated into an overall budget for the entire organization" (Khan and Jain, 1993: 575).

f) Co-ordination

"Budgets are prepared for the different components of an organization so as to take care of the situations and problems of each component. The budgets for each of the components are prepared in harmony with each another. This is called coordination" (Khan and Jain, 1993: 575).

J. Master Budget

Master budget is a comprehensive plan, a coordinated set of detailed financial statement of the operating plans and schedule for a short period, usually for a year. In master budget, normally consists of three types of budget.

i) Operating Budget

It relates to physical activities or operations of a firm such as sales, production, purchase, debtors collection and creditors payment schedule.

a) Sales Budget

"The sales budge is concerned with probable sales physical quantities and values for a future budget period. The choice of method to employ for forecasting sales is influenced by a number of factors. The nature of the product, the method of distribution, the size of the business and the degree of competition exist some of the considerations" (Batty, 1982: 74).

Sales budget is prepared for sales forecast. A sales forecast encompasses potential sales for the entire industry as well as potential sales for the firm preparing the forecast. Factors that are considered in making sales include:

- Past experience in terms of sales volume.
- Prospective pricing policy
- Unfilled order backlogs.
- Market research studies.
- General economic condition.
- Industry economic condition.
- Movement of economic indicators such as gross national product employment prices and personal income.
- Advertising and product promotion industry competition.
- Market share.

"Sales results from prior years are used as a starting point in preparing a sales forecast" (Brown and Haward, 1969: 173).

b) Production Budget

"The production or output is concerned with estimating the probable output of each product in the forth coming budget period. Where standard products are made the problem is one of deciding how many units of each product can be made by the machines, equipment and other production facilities" (Batty, 1982: 80).

Production budget is a quantity budget, which lays down the quantity of units to be produced during the budget period. The main purpose of this budget is to maintain optimum balance between sales production and inventory position of the firm.

c) Purchase Budget

In the case of merchandising firm, instead of preparing production budget it would prepare a merchandise purchase budget showing the amount of goods to be purchased from it suppliers during the period. The merchandise purchase budget is in the same basic formal as the production budget, except that it shows goods to be purchased rather than goods to be produced.

d) Direct Materials Budget

Material budge is prepared after the determination of production need. Sufficient raw material will have to be available to meet production needs and to provide for the desired ending raw material inventory for the budget period. Part of these raw material requirements will already exist in the form of a beginning raw material inventory. The remainder will have to be purchased from supplier.

e) Direct Labour Budget

It is also developed from production budget. Direct labour budget is calculated on the basis of labour hours required for budget production volume and labour hour rate for each type of labour force. For budgeted production volume the engineering and personnel departments can work together to determine the necessary labour required for the production department. Labour requirements are stated in total number of workers. Specific number of skilled and unskilled workers and production hours needed for given production volume.

f) Manufacturing Overhead Budget

It provides the schedule of the cost of production other than direct material and direct labour. All indirect cost likely to be incurred by the factory departments have to be included on it. It is the aggregate of indirect expenses of factory department.

g) Selling and Administrative Overhead Budget

Selling and administrative overhead budget contains a listing of anticipated expenses for the budget period that will be incurred in a area other than manufacturing. The budget will be made up of many. Smaller, individual budgets submitted by various persons having responsibility for cost control in selling and administrative matters. If the number of expenses items is very large. Separate budgets may be needed for the selling and administrative functions.

ii) Financial Budgets

Financial budgets are concerned with expected cash receipts/ disbursement, financial position and results of operations. The component of financial budgets are mentioned below:

a) Budgeted Income Statement

"Budgeted income statement is one of the key schedules in the budget process. It is the document that tells that profitable operations are anticipated to be in the forth-coming period. After it has been prepared, it stands as a benchmark against which subsequent company performance can be measured" (Garrison, 1985: 313).

b) Cash Budget

Cash Budget is a summary of the firms expected cash inflows and outflows over a projected time period. In other words, cash budget involves a projection of future cash receipts and cash disbursements over various times intervals. So it is also owed as cash receipts and cash disbursements budget. The cash budget is composed of four major sections.

- The receipt section
- The disbursement sections
- The cash excess or deficiency section.
- The financing section.

c) Budgeted Balance Sheet

"Budgeted balance is a statement of assets and liabilities prepared after the preparation of functional and financial budgets. It is based on functional budgets, cash budget, projected income statement and the previous year's assets and liabilities" (Munankarmi, 2002: 236).

K. Budget Committee

"A standing budget committee will usually be responsible for overall policy matters relating to the budget itself. This committee generally consists of the president vice-presidents in charge of various functions such as sales, production, purchasing and the controlling. Difficulties and disputes between

segments of the organization in matters relating to the budget are resolved by the budget committee. In addition the budget committee approves the final budget and receives periodic reports on the progress of the company in attaining budgeted goals" (Brown and Haward, 1969: 91).

L. Zero Based Budgeting

Zero based budgeting is a new approach to budgeting. It is defined as an "operative planning and budgeting process which requires each manager to justify his entire budget in detail from scratch and shifts the burden of proof to each manager to justify why he should spend any money at all" (Brown and Haward, 1969: 96). This approach requires that all activities should be identified in 'decision-packages' which should be evaluated by systematic analysis and ranked in order of importance.

"Zero based budgeting differs from traditional budgeting, in which budgets are generally initiated on an incremental basis; the managers stay with last year's budget and simply adds to it according to anticipated needs. The manager does not have to start at the ground each year and justify on going costs for existing programs. It is useful in many companies for improving management development, fostering innovations for better results and resolving problem in decision-making" (Srinivasan, 1992: 325).

M. Activity Based Budgeting

Activity based costing is a system that first accumulates the cost of each activity of an organization and then applies the costs of activities to the products, services, or other cost objects using appropriate cost drivers.

"To apply activity based costing an organization must first engage in activity analysis; managers identify the major activities undertaken by each department and select a cost driver for each activity" (Horngren, 1996: 458).

N. Standard Costing

The word 'standard' means bench mark or yard stick. The standard cost is predetermined or expected cost which determines what each product or service should cost under given conditions. It is the expected cost of producing one unit.

The institute of costs and management accounts, England defines standard costing as "the preparation and use of standard costs their comparison with the actual costs, and the analysis of variances to their causes and the points of incidence". Variance is the difference between standard and actual amount during a given period. Following steps are involved in standard costing.

- Preparation and use of standard.
- Comparison of actual costs with standard to determine the variances; and
- Investigating the variance and taking appropriate actions where necessary" (Srinivasan, 1992: 522).

O. Control through Standard Cost

"In attempting to control costs, managers have two types of decisions to make decisions relating to prices paid and decision relating to quantities used. Managers are expected to pay the lowest possible prices, consistent with the quality of output desired, in attaining the objectives of their firms. In attaining, these objectives, managers are expected to consume the minimum quantity of whatever resources they have at their command, again consistent with the quality of output desired. Break downs in control over either price or quantity will lead to excessive cost and to deteriorating profit margins. Managers could personally examine every transaction that takes place to control price paid and quantity used, but this would be an inefficient use of management time. Thus, the answer to the control problem use in standard cost" (Garrison, 1985: 355).

P. Setting Standard Cost

"It requires the combined thinking and expertise of all persons who have responsibilities over prices and quantities of inputs. The beginning point in setting standard cost is a rigorous look at past experience. The managerial accountant can be great help in this task by preparing data on the cost features prior year's activities at various levels of operations" (Garrison, 1985: 354). A standard for the future must be more than simply a projection of the past; however data must be adjusted and modified in terms of changing economics patterns, changing demand and supply characteristics and changing technology.

Q. Analysis of Variance

Variance analysis is a control technique. The control process involves comparison of actual costs (AC) with standard costs (SC) variance represents the difference between AC and SC. They basically represent performance deviations. If AC is less than SC, it is a sign of efficiency and the difference is termed 'favourable'. If AC exceeds SC, the difference is referred to as unfavourable and represents a sign of inefficiency.

Control is a very significant function of management. Through control, management ensures that performance of the organization confirms to its plans and objectives. Analysis of variances is helpful in controlling the performance and achieving the profits that have been planned.

"For, purpose of control, variance are classified into controllable and uncontrollable. If variance can be traced with the responsibility of a particular segment, it is said to be controllable if variance arises from causes beyond control of responsible individuals, it is said to be uncontrollable" (Khan and Jain, 1993: 642).

R. Decision Making

Decision making involves choosing between different courses of action. The tailoring of the data in line with the decision situations requires the application of different concepts which are not in consonance with the generally accepted accounting principles for external reporting purpose. All costs, must, of course be covered in the long-run; otherwise, a firm will not survive. Nevertheless, in the short-run, some costs can be ignored. The cost concepts which are relevant to short term decision-making are opportunity cost, sunk cost, avoidable cost and incremental cost. Only cost that have bearing on the decision are applicable to the choice between alternatives. Decision making costs are the relevant costs, defined as the future costs that will change with the decision.

a) Decision Situations

I) Sales Volume Related Decision

i) Special Order

Frequently, the opportunity arises for management to consider an order for a quantity of its regular product at a special price, when there is idle capacity, such as offer may be attractive. If there is idle capacity, the special order is advantageous if the price amounts to more than out of pocket costs.

ii) Disposing of Inventories

"Pricing decision must consider the relative marketability of inventories. Due to damage or lack of demand, inventory may not be saleable through normal marketing channels or under normal operating conditions. In such cases, incremental analysis is appropriate for decision-making as all prior costs of producing inventory are sunk costs and therefore, irrelevant to the decision" (Khan and Jain, 1993: 833).

iii) Loss-Leaders

"Sometimes an item may be deliberately priced so low that the firm has to suffer loss in the expectation that additional sales will be generated which will offset the loss such sales are referred to as loss leaders" (Khan and Jain, 1993: 834).

II) Sell or Further Process the Product

"Short-term incremental analysis also applies to sell or process further decision situations when an item of production process through various processes. It is saleable at different stages, i.e., at various physical stages of production. In deciding at what stage to sell the product; the two critical variables are: (i) Identification of Sunk Costs, and (ii) Calculation of Incremental returns at various sales alternatives. All costs, whether fixed or variable, incurred before the sell or process further point should be treated as sunk and therefore, irrelevant costs. The incremental return relevant to the decision is the difference between the costs that are incurred beyond the decision point and the revenues. If, however, the fixed resources would remain idle as a result of not processing the product further and if they could be diverted to some other use, opportunity cost would also become relevant to the decision analysis" (Khan and Jain, 1993: 835).

II) Make or Buy Decision

"Many firms have to choose between manufacturing certain components themselves or acquiring them from outside suppliers. Incremental analysis provides solutions to this kind of decision problems. The relevant input information is the committed/avoidable costs if the firm has adequate idle capacity to make the components. This is so because the firm would not be required to incur fixed costs or producing the components. If, however, there is need to enlarge the capacity of existing plant or the existing capacity of the plant is diverted for the production of the components, opportunity cost, in

terms of lost contribution will be relevant to the decision analysis" (Khan and Jain, 1993: 838).

IV) Addition/Elimination of Product Lines/ Division/ Shift/Department

"When a firm is divided into multiple sales outlets, product lines, divisions department (segment). It may have to evaluate their individual performance to decide whether or not to continue operations of each of these segments. The decision criterion would be the segment margin. The segment margin equals segment's contribution margin less fixed costs that are directly traceable to the segment" (Khan and Jain, 1993: 840).

V) Short-term Use of Scare Resource

Incremental analysis can also be used to allocate resources that are limited in quantity. This requires that alternative courses of action be compared in away that take resource availability into account. The decision criterion in such a situation is the contribution margin per unit of the key factor. This will maximize the total contribution of the firm.

VI) Joint Output of Common Processing Operations

"A decision-situation faced by the management is whether to sell joint outputs at the split-off point or process them further. The decision criterion should be to choose the alternative which will maximize the total contribution of the various joint products to the common processing costs. As the common processing cost before the split off point are sunk costs that have already been incurred to create the joint products they are irrelevant and will not be considered in decision making" (Khan and Jain, 1993: 844). The only relevant cost will be the additional common processing costs. A related short term decision involves selecting an alternative processing plan for joint products when the proportions of the outputs from the common processing costs can vary.

VII) Operate or Shut Down

"The decision criterion in such a situation will be based on the comparison of the shut down losses and the losses associated with continuing operations" (Khan and Jain, 1993: 846).

2.1.7 Pricing of the Product and Services

"Pricing decisions are decision that managers make about what to charge for the products and services they deliver. The pricing of product is not just marketing decision or a financial decision; rather it a decision touching on all aspects of firms' activities and as such of affects the entire of firm's activities and as such of affects the entire enterprise. As the prices charged on products largely determine the quantities customers are will to purchase the setting of prices dictates inflows of revenues consistently fail to cover all the costs of the firm and then in the long run, the firm cannot survive" (Garrison, 1985: 499).

For pricing decision economists have their own view while accountant has their own perspective. Economic theories indicate that companies acting optimally should produce and sales units until the marginal revenue equal marginal cost the market price is the price that creates a demand for these optimal numbers of units. But economic theory of pricing based on marginal cost and revenue approach is subject to criticism. "On the ground that this models of pricing is applicable only in monopoly and monopolistic competition market. This model of pricing on marginal revenue and cost is not applicable to oligopolistic situation. Thus management account has different perspective regarding pricing decision. They consider cost as the key factor to pricing decision of the standard product" (Horngren, and Stratton, 1996: 430-431).

"Not all pricing decisions can be approached in the way as economics theory describes. Some pricing of standard products that are sold to customers in the routine day to day conduct of business activities other pricing decision related a special order of standard or near standard products and still others related the

pricing of the special products that have been taken on in an effort to fill out unused productive capacity. The ways of pricing special products are:

- Cost Plus Pricing
- Target Cost Pricing
- Variable Cost Pricing
- Full (Absorption) Cost Pricing" (Garrison, 1985: 505-507).

A) Cost Plus Pricing

Company uses various strategies to set price for their products. Demand is one side of the equation of pricing and supply is the other side. Since, revenue must cover the cost for the firm to make a profit, many companies start with cost to determine the price of the product. Since cost is an important determinant of supply, it is known to the producer. Many companies base price on cost. Under cost base pricing method a percentage mark-up is added to the estimated cost of product to provide a reasonable level of profit.

There are two approach of computing cost in cost plus pricing.

- Absorption approach
- Contribution approach

Under absorption approach in cost plus pricing while computing the cost both variable and fixed manufacturing overhead are taken in to consideration then add some mark up to the cost and thus arrive at target selling price.

"Under contribution approach in cost plus pricing to compute the cost, only the variable manufacturing overhead are taken into consideration and then to add some mark up percentage enough to cover fixed manufacturing overhead, selling and administrative overhead target selling price" (Horngren, and Stratton, 1996: 433-436).

Under absorption approach, mark-up% is computed as such:

$$\text{Mark-up\%} = \frac{\text{Desired return on assets employed} + \text{Selling and Administrative Expenses}}{\text{Volume in Units} \times \text{Unit Cost of Manufacture}}$$

Under contribution approach, mark-up% is computed as such

$$\text{Mark up \%} = \frac{\text{Desired return on assets employed} + \text{Fixed Cost}}{\text{Volume in Units} \times \text{Unit Variable Expenses}}$$

B) Target Cost Pricing

A target pricing is the estimated price for a product or service that potential customer will be willing to pay. This estimate is based on an underwriting of customers perceived value for a product and competitors' responses. A target operation income per unit is the operating income that company wants to earn on each unit of a product sold. This target price leads to target cost. A target cost per unit is the estimated long-run cost per unit of a product that when sold at the target price enables the company to achieve the target operation income per unit. Subtracting the target operating income per unit from the target price desires target cost per unit. "Developing target prices and target cost requires the following:

- Developing a product that satisfied the needs of potential customer.
- Choose a "target price" based on customers perceived value for the product and prices completions charge and a target operating.
- Income per unit
- Desire a target cost per unit by subtracting the operating.
- Income per unit from the target price.
- Perform value engineering to achieve target cost" (Horngren and Stratton, 1996: 430).

C) Variable Cost Pricing

Under variable cost pricing method, pricing of the product is determined by adding markup to the variables expenses, the conditions under which a price base don variable cost is appropriate are as follows:

- When idles capacity exists
- When operating under distress conditions and
- When faced with sharp competition on particular orders under a competitive bidding system.

D) Full Cost Pricing

"Contrast to variable cost pricing, full cost pricing takes into account both product and period cost, reaching to the selling price. Under this approach total cost including fixed manufacturing cost is taken into account and then add markup and thus arrive at selling price" (Garrison, 1985: 516-517).

E) Transfer Pricing

Transfer prices are the amount charged by one segment/division of an organization for a product or service that it supplies to another segment of the same organization. Transfer prices represent the value of goods are services furnished by a profit center to other responsibility centers within an organization.

Methods of transfer pricing

i) Market Based Transfer Pricing

Transfer price based on the market price/value of the product or service is known as market based transfer pricing. Under this method, the prevalent market price is adopted for the transfer of product.

ii) Cost-based Transfer Pricing

Sub unit may choose a transfer price based on the costs of producing the product in question. Examples include variable manufacturing costs, manufacturing (Absorption) Cost and full product costs. Full product costs include all production costs, as well as costs from other business functions such as research and development design, marketing, distribution and customer service. The cost used in cost-based transfer price can be actual costs or budgeted costs.

iii) Negotiated Transfer Pricing

Under this method, the transfer price is negotiated between the transferor and transferee units after considering all factors of supply and demand, quality and time of delivery and the price. That is, as an alternative to setting prices based on rules or formulates transfer prices could be set by negotiation between the buying and selling divisions.

iv) General Transfer Pricing

General transfer prices represent the value of goods or services furnished by a profit center to other responsibility centers within an organization. General transfer prices are the amount charged by one segment/division of an organization for a product or service that it supplies to another segment of the same organization.

2.1.8 Financial Statement Analysis

The financial statements provide a summarized view of the financial position and operations of the firms. Therefore much can be learnt about a firm from a careful examination of its financial statements as invaluable documents/performance report.

The analysis of financial statement is a process of evaluating relationships between component parts of financial statement to obtain a better understanding of the firm's position and performance. In brief, it is the process of selection, relation, evolution.

I. Technique of Financial Statement Analysis

A) Ratio Analysis

"Ratio is the numerical or an arithmetical relationship between two figures. Absolute figure are valuable but they standing alone convey no meaning unless compared with another" (Jain and Narang, 1997: 25). Accounting ratios show interrelationships which exist among various accounting data. When relationships among various accounting data supplied by financial statements are worked out, they are known as accounting ratios.

Ratio Analysis a widely used tool of financial analysis is defined as the systematic use of ratio to interpret the financial statements so that the strengths and weakness of a firm as well as its historical performance and current financial condition can be determined. The term ratio refers to the numerical or quantitative relationship between two items/variables.

Ratio can be classified for purpose of exposition into four broad groups.

i) Liquidity Ratio

"The importance of adequate liquidity in the sense of the ability of a firm to meet current/short-term obligation when they become due for payment can hardly be over-stressed. Liquidity is a pre-requisite for the very survival of a firm. The liquidity ratios measure the ability of a firm to meet its short-term obligations and reflect the short-term financial strength/solvency of a firm" (Khan and Jain, 1993: 61).

ii) Capital Structure/Leverage Ratio

Capital Structure/Leverage refers to employment of funds to accelerate rate of return to owners. It can be defined as "financial ratios which throw light on the long-term solvency of a firm reflected on its ability to assure the long-term creditors with regard to:

- Periodic payment of interest during the period of the loan and
- Repayment of principal on maturity or in pre-determined installments at due dates" (Khan and Jain, 1993: 72).

iii) Profitability Ratio

"Profit is the difference between revenue and expenses over a period of time. Profit is the ultimate output of a company and it will have no future if it fails to make sufficient profit" (Khan and Jain, 1993: 78-79). The operating efficiency of a firm and its ability to ensure adequate return to its shareholders depends ultimately on the profits earned by it. The crucial importance of profits of a firm cannot be over-stressed. Profitability is a measure of efficiency and the search for it provides an incentive to achieve efficiency. Profitability also indicates public acceptance of the product and shows that the firm can produce competitively. Moreover, profits provide the money for repaying the debt incurred to finance the project and the resources for the internal financing of expansion.

iv) Activity Ratio

"Activity ratios are concerned with measuring the efficiency in assets management. An activity ratio may be defined as a test of the relationship between sales (More appropriately with cost of sales) and the various assets of a firm depending upon the various types of assets" (Khan and Jain, 1993: 90).

B) Cash Flow Analysis

Cash is the life blood of a business enterprise. It is the fuel that keeps a business alive. Without cash no activities can take place. So, a business must have an adequate amount of cash to operate. As such the decision makers must pay close attention to the firm's cash position and events and transactions that affects/cause cash position to change. The analysis of the events and transactions that affects the cash position of the company is termed as such flow analysis.

"A cash flow statement can be defined as statement which summarizes sources of cash inflows and uses of cash outflows of a firm during particular period of time, say a month or a year. Such a statement can be prepared from the data made available from comparative balance sheets, profit and loss account and additional information" (Jain and Narnang, 1993:186).

Cash flow analysis is done through preparing cash budget. Cash is an important current assets, should be managed carefully, though it is zero earning assets. It is held by the firm with different purposes such as

- Transaction Motive
- Precautionary Motive
- Speculative Motive

Timely available of needed cash in the firm represent the sound management of cash. Cash flow analysis shows the planned cash inflows and outflow and ending position by interim periods for a specific time span. A cash flow basically includes two parts.

- Cash inflow
- Cash outflows

Cash inflows arises from transactions such as cash sales, collections of accounts, and notes receivable, interest received on investment, sales of capital assets and miscellaneous income sources. While cash outflow arises from payment for material, direct labour, expenses, capital additions retirement of debt and dividend paid to shareholders. The cash flow analysis while planning cash inflows and outflows ignores the non-cash items such as depreciation, amortization etc.

"Planning cash inflow and outflow gives the planned beginning and ending cash position for the budget period. Planning the cash inflows and outflows indicate.

- The need for financing cash deficit
 - The need for investment planning to put excess cash to profitable use"
- (Brown and Haward, 1969: 433).

II. Capital Budgeting

Most of cost and management accounting procedures were developed during the nineteenth and first quarter of the twentieth century. They further stated that before World War I some organisations were trying to develop and use accurate cost accounting systems to trace costs accurately to diverse lines of products. This evidence confirms that even the idea and logic behind activity based costing for designing an accurate costing method is not new.

The application of non-accounting information (financial and non-financial) in management accounting, which has attracted considerable attention in the last two decades is not new either. According to Johnson (1992:24), as far back as the first half of nineteen century, businesses owners and managers were using non-financial information to control organisational operations. The idea of paying more attention to the working people and customers of organisations as a long-term source of profit also dates back to before the 1950s.1969:: 394).

Capital budgeting normally refers to long term planning for proposed capital outlays and their financing. It is the decision-making process by which firms evaluate the acquisition of major fixed assets whose benefits would be spread over several time periods. It involves current investment in which the benefits are expected to be received beyond one year in the future. The use of one year as a line of demarcation is, however, somewhat arbitrary. The main exercise in capital budgeting involves generation of investment proposals and evaluation of net benefits and selection of projects based up on an acceptance criterion.

"Some of main principles involved in selecting the most profitable project should be apparent. As will be appreciated the most appropriate method should be selected. A table of comparative returns can be produced and from this the order of preference can be seen. Only by considering alternative courses of action can management exercise the initiative and judgment so essential for maximizing profit" (Batty, 1982: 477).

a) Methods of Capital Budgeting: Measuring the Economic Value of Capital Expenditure

Capital budgeting system involves evaluating the profitability of the alternative project and selecting the best one. A firm may face a situation where more investment proposals may be available than investible funds. Some proposals may be good, some moderate, and many poor. Hence, a ranking procedure has to be evolved so that the available funds can be allocated among different proposal in a profitable manner. Essentially, the ranking procedure envisages relating to a stream of future benefits to the cost of investments. Among the various methods, the following are commonly used by many business concerns.

1. Traditional or non time techniques
 - a. Pay Back Period
 - b. Average rate of return
2. Modern or time value techniques

D decision criteria

When IRR is used to make accept-reject decision, the decision criteria are as follows:

If the IRR is greater than the cost of capital, accept the project.

If the IRR is less than the cost of capital, reject the project

This criteria guarantee that the firm earns at least its required return. Such as, outcome should enhance the market value of the firm and therefore the wealth of its owners.

Selection criteria

"In the case of an independent investment, accept the project if its IRR is greater than the cut-off rate; if lower reject it. In the case of mutually exclusive projects, accept the project with the largest IRR, provided it is greater than the cut-off rate; reject others. In case, there are budget constraints, rank the projects in the descending order of their IRR's and choose the first 'X' number of projects which the budget provision permits" (Srinivasan, 1992: 371-372).

e) **Profitability Index or Benefit Cost-Ratio**

Profitability index is the ratio of gross discounted benefits to gross discounted cost. This may be used as an extension of NPV and expressed in coefficient, or in percentage, symbolically; this could be expressed as follows:

$$\text{Profitability index (PI)} = \frac{\text{Present Value of Cash Inflow}}{\text{Present Value of Cash Outflow}}$$

It is the ratio of present value of net cash benefits to the present value of net cash outlay.

Selection criteria:

"As long as the profitability index is 1.00 or greater, the investment proposal is acceptable. For any given project, the net present value and the profitability index method given the same accept-reject signals. The net present value method, however, is often preferred over the profitability index method. The reason for this is that the net present value tells you whether to accept a project or not and also express the absolute dollar economic contribution that the project makes to shareholder wealth. In contrast profitability index express only the relative profitability" (Brown and Haward, 1969:: 338).

III. Investment Analysis

A) Cash Flow Estimation in Investment Analysis

Cash flow information is most critical input in investment analysis. Cash flows should be estimated on the incremental basis. Three components of cash flows are: initial investment, annual net cash flow and terminal cash flows. Initial investment includes original cost of the project plus working capital investment, if any. Annual cash flow is the difference between revenues and expenses and taxes in Cash flow terms. Taxes are based on accounting profit. Depreciation is tax deductible, but is a non-cash item. Changes in working capital in each period should also be adjusted for calculating net cash flows. Any capital expenditure during the life of the project should also be subtracted. Thus the net cash flows (also called free cash flows) can be calculated as follows:

$$\Delta\text{NCF} = \Delta\text{EBIT}(1-T) + \Delta\text{DEP} - \Delta\text{NWC} - \Delta\text{CAPEX}$$

where,

Δ = Indicates change

NCF = Net Cash Flow

EBIT = Earning Before Interest and Tax

T = Tax

DEP = Depreciation

NWC = Net Working Capital

CAPEX = Cash Outflow for Additional Capital Expenditure

Note that interest charges are not considered in the computation of cash flows since the discount rate used for discounting cash flows incorporates the effects of interest on debt. Terminal cash flows include the salvage value of the project and the r Most of cost and management accounting procedures were developed during the nineteenth and first quarter of the twentieth century. They further stated that before World War I some organisations were trying to develop and use accurate cost accounting systems to trace costs accurately to diverse lines of products. This evidence confirms that even the idea and logic behind activity based costing for designing an accurate costing method is not new.

The application of non-accounting information (financial and non-financial) in management accounting, which has attracted considerable attention in the last two decades is not new either. According to Johnson (1992:24), as far back as the first half of nineteenth century, businesses owners and managers were using non-financial information to control organisational operations. The idea of paying more attention to the working people and customers of organisations as a long-term source of profit also dates back to before the 1950s. w estimation and evaluation; project selection and project follow up and control" (Pandey, 1999: 384-385).

B) Risk and Uncertainty in Capital Budgeting

"The risk associate with a project may be defined as the variability that is likely to occur in the future returns from the project. The decision situation as to risk may be certainty, risk and uncertainty is that risk involve situations in which the probabilities of a particular event occurring are known, whereas with uncertainty these probabilities are not known" (Munankarmi, 2002: 627).

Most common measure of risk is:

- Standard deviation
- coefficient of variation

To have accuracy in decision regarding capital budgeting, we use various techniques for handling risk and uncertainty. The various techniques of handling risk and uncertainty can be grouped as under:

Conventional Techniques

- Pay Back Period
- Risk Adjusted Discount Rate
- Certainty Equivalent
- Sensitivity Analysis

Statistical Techniques

- Probability Assignment
- Standard Deviation
- Co-Efficient of Variance
- Decision Tree

C). Conventional Techniques

a) Pay Back Period

It is one of the oldest and commonly used methods for explicitly recognizing risk associated with an investment project. Business firms using this method usually prefer short payback to longer ones.

b) Risk Adjusted Discount Rate

For a long time the economic theories have assumed that to allow for “risk the business man required a premium over and above and alternative which was risk free. Accordingly, the more uncertain the return in the future, the greater the risk and the greater the premium required.

c) Certainty Equivalent

A common procedure for dealing with risk in capital budgeting is to reduce the forecast risk in capital budgeting is to reduce the forecast of cash flows to some conservative level. The certainty equivalent coefficient (α) assumed a value

between zero and one and varies inversely with risk. A lower α_t will be used if greater risk is perceived and a higher α_t will be used if lower risk is anticipated.

d) Sensitivity Analysis

It provides information as to how sensitive the estimated project parameters, namely. The effected cash flow, the discount rate and the project life are to estimation errors. The analysis on these lines is important as the future is always uncertain and there will be always estimation errors. Sensitivity analysis takes care of estimation errors by using a number of possible outcomes.

D). Statistical Techniques

i) Probability Assignment

Probability distribution of cash flows over time provides valuable, information about the expected value of return and the dispersion of the probability distribution of possible returns.

ii) Standard Deviation

Standard deviation measures the deviation or variance about the expected cash flow of each of the possible cash flows. Formula to calculate standard deviation is

$$\sigma = \sqrt{\sum_{i=1}^n (A_{it} - \bar{A}_t)^2 P_{it}}$$

where

σ_t = Standard deviation for each periods cash flows,

A_{it} = net cash flow

\bar{A}_t = expected value of the net cash flow

P_{it} = Probability associated with each cash flow

iii) Coefficient of Variation

It is defined as the standard deviation of the probability distribution divided by its expected value. The coefficient of variance is a useful measure of risk when we are comparing the projects which have,

- Some standard deviation but expected values.
- Different standard deviation but same expected values.
- Different standard deviation and different expected values.

iv) Decision Tree

"It takes in to account the impact of all probabilistic estimates of potential outcomes. In other words, every possible outcome is weighted in probabilistic terms and then evaluated. The decision tree approach is especially useful for situations in which decision at one point in time also affect the decisions of the firm at some later date. Another useful application of the decision tree approach is for such projects which require decisions to be made in sequential parts" (Khan and Jain, 1993: 313-337).

2.1.9 Responsibility Accounting

Responsibility accounting is a system of accumulating and reporting both actual and budgeted costs and revenues by individuals responsible for them.

Among the control techniques "responsibility accounting" has assumed considerable significance. "While the other control devices are applicable to the organization as a whole, responsibility accounting represents a method of measuring the performance of various divisions of an organization.

Responsibility accounting is based on cost and revenue data or financial information. The basic principles underlying responsibility accounting are:

- Responsibility centers (decision units) within an organization are identified.
- For each responsibility center, the extent of responsibility is defined.
- Controllable and non-controllable activities at various levels of responsibility are specified.
- Accounting system to accumulate information by area of responsibility is specified.
- Performance reports are prepared to provide information to those who will use them" (Pandey, 1999: 511).

A) Responsibility Centers

Responsibility center is a unit of an organization under the supervision of a manager who has the responsibility for the activities of that responsibility center. "The responsibility center manager may have a big unit, such as the production department, or a small unit, such as the cash section of the accounting department, or a machine in the production department. Two important criteria should be used to create a responsibility center.

- The organization unit should be separable and identifiable for operating purpose.
- It should be possible to measure the performance of the unit.

For planning and control purpose, responsibility center are classified into three classes.

- **Cost center:** A responsibility center is called a cost center when the manager is held accountable only for cost incurred.
- **Profit Center:** A responsibility center is called profit center when the manager is held responsible for both cost (inputs) and revenues (outputs), and thus for profit.

- **Investment center:** A responsibility center is called an investment center, when its manager is responsible for costs and revenues as well as for the investment in assets used by his center" (Pandey, 1999: 514-515).

i) Decentralization

Decentralization is the delegation of decision making power to the sub-units of an organization. The lower the level of management where decisions are made, the greater is the decentralization. Decentralization is effective in organizations where cost and profit measurement is necessary and is most successful in organizations where subunits of are totally independent and autonomous, benefits of decentralization are

- The lower level manager have the best information concerning local conditions and able to make better decision than their superiors.
- Managers acquire the ability to make decision and other management skills that assists their movement upward in the organization.
- Managers enjoy higher status from being independent and thus are better motivated.

ii) Cost of Decentralization

- Managers have a tendency to look only at their division and lose sight of overall company goals.
- There can be costly duplication of services.
- Cost of obtaining sufficient information increase.

"Decentralization is more popular in profit seeking organizations than in non-profit organization. Manager can be given freedom when their results are measurable so that they can be held accountable for them. Poor decision in profit seeking firm become apparent from the inadequate profit generated. Most non-profit organization lacks such a reliable performance indicator so granting managerial freedom is more risky" (Horngren, 1978: 343).

2.2 Review of Related Studies

Many researchers had conducted various studies about profit planning in the context of Nepalese manufacturing enterprises. But up to now no one has studied in “Management accounting practices in Nepalese manufacturing enterprises. Profit Planning and Control Covers” some of the aspect of management accounting, researchers made study on these areas is taken into consideration for the sake of review to examine how profit planning and control practices in Nepalese Manufacturing Enterprises.

- **Sagar Sharma** (2001) has submitted that 43% of manufacturing companies practice responsibility accounting, 33% manufacturing companies practice long term budgeting where as only 5% of the manufacturing companies were practicing new management accounting tools, Activity Based Budgeting.
- Regarding the practice of capital budgeting tools in the Nepalese manufacturing enterprises, from the study it was found that 29% of the Nepalese manufacturing companies practice NPV. As regards to the criteria of capital budgeting, 27% practice PBP, 18% practice ARR to make long term investment decision and 14% practiced IRR for long-term investment.
- Regarding master budget it was found that 69% of the manufacturing companies practiced overall master budget. 18% practice only cash budget and 5% practiced operational budget for operating activities.
- Regarding the tools practiced by the Nepalese manufacturing companies for measuring and controlling their overall performance. It was found that 58% of the manufacturing companies measure their performance on the basis of profit or loss made by them during the year while 23% of the companies practiced for measuring and controlling performance of the company. Where as budgetary costing & break-even point were followed by 5%.
- Regarding the techniques practiced by the Nepalese manufacturing companies for pricing the product. It was found that 58 % of the companies practice cost plus pricing, while 24 % of the companies practice going rate

pricing and 5 % of the companies practiced target return pricing and break even pricing for their product.

- Regarding the joint cost allocation tools practiced by the Nepalese manufacturing companies. It was found that 39 % of the companies practiced joint cost allocation as a unit or production basis. 35 % of the manufacturing firms had their own method for joint cost allocation such as ratio method, department wise. About 12 % of the manufacturing companies practice sales value methods for allocating joint cost.

Samir Bhatta (2006) has submitted the thesis on the topic of “*Management Accounting Practices in Nepalese Manufacturing Companies*”. The necessary data and information has been collected through primary as well as secondary sources of data. Objectives are:

- a) To study the practice of management accounting tools in Nepalese manufacturing companies.
- b) To study the problem faced by Nepalese manufacturing companies in applying management accounting tools.
- c) To study the modern management accounting tools practiced by Nepalese manufacturing companies.

Mr. Bhatta has pointed out the following findings in his research work.

- While examine the tools practiced by Nepalese manufacturing companies it was found that capital budgeting, cash flow, ratio analysis and annual budgeting were most practiced as management accounting tools.
- Nepalese manufacturing sector is infant stage in practicing management accounting tools. No one company has separar their product.
- Regarding the decision-making and control process followed by Nepalese manufacturing firm, it was found that 69% of Nepalese manufacturing companies practiced control during the work period. 18% practiced control

before work has to be started, where as 5% practiced controls after finishing the work.

- Regarding the cost and revenue estimation practice of Nepalese manufacturing firm, it was found that 78 % of the manufacturing companies practiced historical trend for cost and revenue estimation while 18 % manufacturing firm practiced market survey. Where as, no one companies practiced zero based budgeting and judgment analysis for their cost and revenue estimation purpose.
- Regarding the area where management accounting tools is effective in practice to make strength of the companies, it was found that 49% in Nepalese manufacturing companies said production area is effective for practicing management accounting tools; 29 % said marketing area is effective and 11 % said financial area is effective.
- Regarding the practice for the issue of inventors in Nepalese manufacturing companies, it was found that 68 % manufacturing companies practiced FIFO method while, 18% practiced weighted average and only 5% practiced specified items by law for the issue of inventory.

Deepak Raj Pandey (2009) has submitted the thesis on the topic of “*A Survey of Management Accounting Practices in the Nepalese Banking and Financial Companies*”. The necessary data and information has been collected through primary sources of data collection. The objectives are:

- a) To survey the areas where management accounting tools in the Nepalese banking and financial companies.
- b) To survey the present practice of management accounting tools in Nepalese banking and financial companies.
- c) To survey the problem faced by Nepalese banking and financial companies while applying management accounting tools.

Mr. Pandey has pointed the following findings in his research work.

- Regarding the tools practiced in the Nepalese banking and financial companies for decision making, planning and controlling it was found that annual budgeting, capital budgeting, cash flow, ratio analysis were the major management accounting tools practiced in those companies widely. Almost companies practiced these tools in carrying out operational activities. Similarly, zero based budgeting, standard costing, activity based budgeting, responsibility accounting were almost unused tools in Nepalese banking and financial companies.
- In case of long term investment decision making, Nepalese banking and financial companies mostly practiced pay back period and net present value technique. Almost 84% of those companies practiced these tools while making capital budgeting decision.
- While examining the budget preparation system, almost 60% of the companies prepared the budget. In 32% of those companies, chief of finance division prepared the budget. Similarly, in 24% of the companies, separate planning department prepared the budget, whereas in 12% of those companies, the budget was prepared by outside experts.
- While examining different banking and financial companies, 88% of those companies were practicing past trend analysis, 36% of those companies were practicing judgmental analysis and 20% of those companies were practicing market survey technique to estimate cost and revenue.
- Regarding the role of management accounting tools, out of total Nepalese banking and financial companies, 64% of those companies accepted management accounting tools as a voluntary role and 36% among them were expressed their view as not applicable for their companies. None of the companies expressed their opinion for record keeping role of management.

2.3 Research Gap

There is the gap between the present research and the previous researches conducted on Management Accounting Practices in Nepalese Manufacturing Companies. They were either a case study of a particular company or a comparative study of two different companies. The findings of the previous researches were mostly based on the secondary data. The previous researches did not disclose which of the accounting tools are mostly practiced and which are not and why? Thus, to fill up these gaps the current research is conducted. This research is a survey type of research. It is completely based on the primary sources of data and even secondary data too. Market survey in managerial activities of planning, controlling and decision making probably the new research study made in present study. Thus, present study will be fruitful to those interested person, parties, scholars, professor, students, businessmen and government for academically as well as policy perspective.

CHAPTER III

RESEARCH METHODOLOGY

The research methodology is followed to achieve the basic objectives and goals of the research work. This research is conducted with the view to examine the present practice of management accounting tools in Nepalese manufacturing enterprises with the help of different types of questions.

3.1 Research Design

The research design adopted on this study is an analytical as well as descriptive type. This study has examined and evaluated of management accounting practitioner in Nepalese manufacturing enterprises. So, the study is closely related to management accounting tools and their implication in planning. Beside, the research has also possessed qualitative of the study which presents view of top management regarding problems faced in formulation and implementation of plans as well as that of lower achievement and so on.

3.2 Population and Samples

The research work is designed to study the present practice of management accounting tools by Nepalese Manufacturing Enterprises. The total 28 present number of manufacturing enterprises in Nepal is the population of the study. Among them the companies which are in existence and which have their head office located in Kathmandu valley were considered as the targeted population for the study. Thus the total population was 18 companies. Out of 18 companies 15 companies were chosen for the study. 18 questionnaires were distributed to the employees of sample companies and only 15 responses were obtained.

3.3 Sampling and Procedure for Analysis

To meet the objectives, all manufacturing companies having head office in Kathmandu valley which are in operation, are taken as population. Among them questions were distributed to 18 companies out of which response was received from 15 companies. Besides questionnaires, discussions were also made with general manager, finance in-chief and account in-chief of the companies. To get more information about the present practice of management accounting tools, views of managers, accountants and finance in-chief are also included in this study. Raw data were properly processed, tabulated and analyzed. They were presented in to tables. Tables were developed on the basis of questions asked.

3.4 Sources of Data

To fulfill the objective of this study both primary as well as secondary data have been used. Primary data are collected through questionnaire whereas secondary data have been taken from published documents of the related manufacturing enterprises. They were classified and tabulated in the required form.

3.4.1 Primary Data

The research is based on primary data. Carefully designed research instrument (questionnaire, see appendix-ix) were used for primary data analysis. The researcher has carefully designed questionnaire by considering various influencing factor of management accounting tools. Basic sources of primary information were employees of concerned companies. In addition, answers to certain queries made by staffs of concerned organization are also included. Personal enquires and discussions were also being conducted for clarification and verification of collected data.

3.4.2 Secondary Data

The data presented in the study are also secondary type. The annual reports of the concerned companies are the major sources of the data for the study. However, besides the annual reports of the concern companies the, published financial statements (i.e. Annual report) of concerned companies are collected. In addition to financial statement of selected companies, various markets related information also collected and tabulated in spreadsheet. Such secondary information was gathered from the share department of the concerned companies and Security Board of Nepal.

3.5 Analysis of Data

Data collected from questionnaire were in raw form. They were classified and tabulated in the required form. Simple arithmetical percentage tools were used for analysis. Major findings were based on interpretation of data.

3.6 Major Research Variables

Management accounting tools such as cost volume profit analysis budgeting standard costing, ratio analysis, capital budgeting, activity based budgeting, zero based budgeting and pricing techniques are the major research variable.

3.7 Tools Used

Data collected from various sources are managed, analyzed and presented in proper tables and formats. Such tables and formats are interpreted and explained as necessary. Financial and statistical tools are used to analyze the collected data. The financial tools mainly used are cost volume profit analysis and capital budgeting. The tools used are as follows:

3.7.1 Cost Volume Profit Analysis

The following CVP analysis and statistical tools have been used under this technique:

CVP Analysis Tools

CVP analysis includes the following extension computations:

- (i)
$$\text{BEP in Units} = \frac{\text{Total fixed costs}}{\text{SPPU} - \text{VCPU}}$$
- (ii)
$$\text{BEP in Rs.} = \frac{\text{Total fixed costs}}{1 - \frac{\text{Variable Cost}}{\text{Sales Price}}}$$
- (iii)
$$\text{Contribution margin} = \text{Sales} - \text{Variable Cost or FC} + \text{Profit}$$
- (iv)
$$\text{Contribution margin ratio} = 1 - \frac{\text{Variable Cost}}{\text{Sales}}$$
- (v)
$$\text{BEP (\% of Capacity)} = \frac{\text{BEP}}{\text{Total Capacity}}$$
- (vi)
$$\text{Operating Leverage} = \frac{\text{Contribution Margin}}{\text{EBIT}}$$
- (vii)
$$\text{Margin of Safety} = \text{Planned or Actual Sales} - \text{BEP}$$
- (viii)
$$\text{Margin of safety ratio} = \frac{\text{Actual/Budgeted sales} - \text{Break even sales}}{\text{Actual/ Budgeted sales}}$$
- (ix)
$$\text{IRR} = \text{LR} + \frac{\text{PV at LR} - \text{PV required}}{\text{PV at LR} - \text{PV at HR}} (\text{HR} - \text{LR})$$

3.7.2 Statistical Tools Used

The Statistical tools include the following techniques to examine the relationship between the variables; and for their analysis:

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

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{\sum U^2}{N} - \left(\frac{\sum U}{N}\right)^2}$$

$$\text{C.V.} = \frac{\sigma}{\bar{X}} \times 100$$

Standard deviation measures the deviation or variance about the expected cash flow of each of the possible cash flows.

3.8 Reliability and Validity of the Data

The data and information were collected from the primary sources to meet the specific objectives of the study. It makes the research work more valid, reliable and objective. The major portion of reliability and validity of data depend upon the interest, level, professionalism, intention, nature, age and capacity of the respondents. The researcher had tried to meet the authentic and prime authorities of the organizations to gather the correct information. Check and balance types questions were also included in the questionnaire.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter presents data and analyses them by using appropriate statistical methods. The first part of the chapter contains the analysis of secondary data, the second part the analysis of primary data and major findings obtained there from.

4.1 Analysis of Secondary Data

4.1.1 Cost Volume Profit Analysis

Cost volume profit (CVP) analysis is the process of examining the relationship among revenue cost and profit for a relevant range of activity for a particular time from. It is one of the most important and powerful tools that managers have at their command in short term planning.

Planning controlling and decision making are the essential managerial functions. Cost volume profit analysis helps managers to plan for profit to control cost and make decision.

From table 4.1, in the year 2003/04 Bottlers Nepal Balaju has highest PV ratio i.e. 0.45. Whereas at the same year, PV ratio of Bottlers Nepal Terai has only 0.336. After that year in 2004/05, 2005/06, 2006/07 and 2007/08 Bottlers Nepal Terai has same 0.33 PV ratios for the 5 years. Higher PV ratio indicate higher rate of profit. So Bottlers Nepal Balaju is more desirable than Bottlers Nepal Terai from the view point of PV ratio.

From the break even point of view Bottlers Nepal Terai has lower break even point than Bottlers Nepal Balaju, due to heavy investment on fixed assets. Bottlers Nepal Balaju, most sale large units to recover fixed cost. After BEP Bottlers Nepal Balaju earn more profit than bottlers Nepal Terai for each and every increased unit in sales.

Table 4.1
Study on CVP Analysis and Leverage of Both Bottlers Nepal Balaju and Bottlers Nepal (Terai) Limited

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Particular					
Bottlers Nepal (Balaju)					
(a) P.V. Ratio = $\frac{C.M.}{Sales}$	0.45	0.38	0.34	0.39	0.39
(b) V.V. Ratio : 1-PV ratio	0.55	0.62	0.66	0.62	0.61
(c) BEP ('000 Rs.) = $\frac{Fixed\ cost}{P.V.\ Ratio}$	299818	409213	550018	533200	496161
BEP as Percent of sales = $\frac{C.M.}{Sales}$	72.213	76.41	90.21	84.35	80.71
(d) Margin of Safety ratio: $\frac{Actual\ sales - Break\ even\ sales}{Actual\ sales}$	0.277	0.236	0.0978	0.156	0.193
(e) Operating Leverage: $\frac{Contribution\ Margin}{EBIT}$	4.07	3.50	6.96	5.54	5.38
Bottlers Nepal (Terai)					
(a) P.V. Ratio: $\frac{C.M.}{Sales}$	0.336	0.332	0.338	0.338	0.337
(b) V.V. Ratio : 1-PV ratio	0.664	0.668	0.682	0.662	0.663
(c) BEP ('000 Rs.) = $\frac{Fixed\ cost}{P.V.\ Ratio}$	299185	308087	378040	351646	339934
BEP as Percent of sales = $\frac{C.M.}{Sales}$	56.13	66.71	81.22	81.40	84.70
(d) Margin of Safety ratio: $\frac{Actual\ sales - Break\ even\ sales}{Actual\ sales}$	0.439	0.332	0.188	0.186	0.153
(e) Operating Leverage: $\frac{Contribution\ Margin}{EBIT}$	2.51	3.07	4.49	5.89	7.06

Where: Contribution Margin = sales - variable cost.

Variable cost = variable cost of goods sold + variable distribution cost

Fixed cost = Administrative expense + promotion expenses + Interest + Depreciation.

In the table 4.1, Bottlers Nepal Terai has high margin of safety ratio i.e. 0.439 in the year 2003/2004. Whereas in the same year margins of safety of Bottlers Nepal Balaju has only 0.27. After that year Bottlers Nepal Terai has

continuously decreased its margin of safety, but bottlers Nepal Balaju has decreased till 2004/05 after that it start to increase in last two years.

A low margin of safety may result for a firm which has a low contribution ratio. Till 2006/07 Bottlers Nepal Terai has greater Margin of safety but in the year 2007/08 Bottlers Nepal Balaju has high margin of safety though both company's margin of safety is in decreasing trend. When both margin of safety and P/V ratio are low management should think of the possibilities of increasing the selling price, provided it does not adversely affect the sales volume or reducing variable cost by bringing improvement in the manufacturing process. The reason for fluctuating of BNBL's figure is due to strike of different political parties, the sales volume fluctuate throughout the study period. The sales volume decreased in Nepal Bandh and valley bandh while increased in normal period.

Degree of operating leverage (DOL) is the percentage change in operating profit (EBIT) on account of change in sales. Above table shows DOL for last 5 years of both Bottlers Nepal Balaju and Bottlers Nepal Terai limited: DOL of Bottlers Nepal Balaju is in fluctuating trend. In the year 2003/04 Its DOL is 4.07 in 2004/05 its DOL is 3.50, in 2005/06 it reaches up to 6.96. After 2005/06 it starts to decrease. In the year 2006/07 and 2007/08 its DOL is 5.54 and 5.38 respectively.

On the other hand DOL of Bottlers Nepal Terai Limited is in increasing trend from 2003/04 to 2007/08. In the year 2003/04 its DOL is 2.51 but in the year 2007/08. It reaches up to 7.076.

The above results of operating leverage between both bottlers Nepal Balaju and bottlers Nepal (Terai) has high. Operating leverage of these companies may decrease by increase in sales revenue above the break even point because fixed cost become relatively smaller compared to revenue/ sales and variable cost.

Table 4.2
Performance of Profit on Sales of Both Bottlers Balaju and Terai Limited
for Last Five Years

Year Particular	2003/04	2004/05	2005/06	2006/07	2007/08	Mean	SD	CV
Bottlers Nepal (Balaju)								
Total sales	417577	535494	609654	632114	614739	561315.6	90002.8	0.16
Net profit	45519	57475	29775	45008	43876	44330.6	9832.5	0.22
% of profit on sales	10.97	10.73	4.88	7.12	7.14			
Bottlers Nepal (Terai)								
Total sales	532945	461490	465439	431969	401320	458692.6	48924.15	0.10
Net profit	71370	49645	33662	24791	18869	39667.4	21181.08	0.53
% of profit on sales	13.39	10.76	7.23	5.74	4.70			

Table 4.2 shows the performance of profit on sales for last 5 years of both Bottlers Nepal Balaju and Bottlers Nepal Terai limited. From above table Bottlers Nepal Balaju has greater sales volume than Bottlers Nepal Terai. Its sales revenue has increasing trend till 2006/07 and it start to decline after that period. The highest sales revenue of Bottlers Nepal Balaju has 632114 thousands, in the year 2006/07. Net profit of Bottlers Nepal Balaju has also increased and decreased on the same way with sales revenue. Percentage of profit on sales of Bottlers Nepal Balaju has very fixable. In the year 2003/04 its percentage of profit on sales is 10.97 and lowest in the year 2006/07 is 7.12% only. Coefficient of variation of sales and net profit for Bottlers' Nepal Terai and Balaju are 0.10, 0.53, 0.16 and 0.22 respectively. Lower CV in sales for Terai indicated that there is consistent in sales volume where as lower value in net profit in case of Balaju indicated that there is consistency in net profit as compare to Bottlers' Nepal Terai. Mean value for both sales and net profit of Bottlers' Nepal Balaju is higher than that of Bottlers' Nepal Terai (See appendix-X and XI for calculation)

Bottlers Nepal Terai has also sales are in decreasing trend. Their highest sale revenue is in the year 2003/04 is Rs. 53294 thousand. After this year it was started to decline year to year. Due to decrease in sales volume its net profit is also in decreasing trend. Percentage of profit and sales has also in decreasing trend in the last 5 years. Hence Bottlers Nepal Balaju has better percentage of

profit on sales than bottlers Nepal Terai. Though, its percentage of profit on sales is also in flexible. The reason for fluctuating of profit is due to strike like, Nepal Bandh and valley bandh program and strike of different political parties, the sales volume fluctuate throughout the year. The sales volume decreased in Nepal Bandh and valley Bandh while increased in normal period which ultimate affect the profit of company.

4.1.2 Internal Rate of Return (IRR)

Calculation of IRR

* Cash flow: NPAT + Depreciation + Postpone Expenditure + Provision for Employment Resident + Employment Bonus Provision + (Profit)/ Loss on Sales of Assets + Dividend from Subsidiary Company.

* Net cash outlay (NCO) = Base year's net fixed assets + cash flow from Investing activity x PVIF_{n, 10%} - Final year net assets.

Table 4.3

Calculation of IRR (Bottlers Nepal Balaju)

Year	Cash flow	PVIF 10%	PV	PVIF 12%	PV
0	(411715)	1	(411715)	1	(411715)
1	102931	0.909	93564	0.893	91917
2	125728	0.826	103851	0.797	100205
3	91336	0.751	68593	0.712	65031
4	119814	0.683	81833	0.636	76202
5	102931	0.621	63920	0.567	58362
		NPV	46	NPV	(1998)
		TPV	411761	TPV	391717

Here, PV at lower rate = 411761

PV at higher rate = 391717

Required P.V. = 411715

Calculation of IRR:

$$\begin{aligned}
 \text{IRR} &= \text{LR} + \frac{\text{PV at LR} - \text{PV required}}{\text{PV at LR} - \text{PV at H.R}} \times (\text{HR} - \text{LR}) \\
 &= 10\% + \frac{411761 - 411715}{411761 - 391717} \times (12 - 10) \\
 &= 10\% + \frac{46}{20044} \times 2\% \\
 &= 10\% + 0.046\% = 10.046\%
 \end{aligned}$$

Table 4.4
Calculation of IRR (Bottlers Nepal Terai)

Year	Cash flow	PVIF 26%	PV	PVIF 32%	PV
0	(160249)	1	(160249)	1	(160249)
1	85848	0.794	68163	0.758	65073
2	66960	0.630	42185	0.574	38435
3	58594	0.500	29297	0.435	25488
4	52470	0.397	20831	0.329	17263
5	43624	0.315	13742	0.250	10906
		NPV	13969	NPV	(3084)
		TPV	174218	TPV	157165

Here, TPV at Lr = 174218

PV at HR = 157165

Req. P.V. = 160249

LR= 26%

HR = 32%

$$\begin{aligned}
IRR &= LR + \frac{PV \text{ at } LR - Req.PV}{PV \text{ at } LR - PV \text{ at } HR} (HR - LR) \\
IRR &= 26\% + \frac{174218 - 160249}{174218 - 157165} \times (32 - 26) \\
&= 26\% + \frac{13969}{17053} \times 6\% \\
&= 26\% + 4.91\% = 30.91\%
\end{aligned}$$

(For more details: see annexes)

Comparing IRR of both companies with 10% cost of capital. We can see that both companies are acceptable because

IRR for Bottlers Nepal Balaju = 10.046% > 10% cost of capital

IRR for Bottlers Nepal Terai = 30.91% > 10% cost of capital.

Comparing the two companies IRR's we would prefer bottlers Nepal Terai over Bottlers Nepal Balaju. Because IRR of Bottlers Nepal Terai = 30.91% > IRR bottlers Nepal Balaju 10.046%. If these projects are mutually exclusive the IRR decision technique would recommend Bottlers Nepal Terai Limited.

4.2 Analysis of Primary Data

Management accounting is an integral part of management concerned with identifying, presenting and interpreting information used for formulating strategy, planning and control activities. It is primarily concerned with data gathering, analyzing, processing, interpreting and communicating the resulting information for use within the organization. So that management can more effectively plan, make decisions and control operations.

The basis objective of the study is to examine the present practice of management accounting tools in Nepalese Manufacturing Enterprises and to identify the area where management tools and accounting tools could be applied to strengthen the company. This chapter presents the analysis and interpretation of data.

To meet the objectives, all manufacturing companies having head office in Kathmandu valley which are in operation, are taken as population. Among them questions were distributed to 18 companies out of which response was received from 15 companies. Besides questionnaires, discussions were also made with general manager, finance in-chief and account in-chief of the companies. To get more information about the present practice of management accounting tools, views of managers, accountants and finance in-chief are also included in this chapter.

Raw data were properly processed, tabulated and analyzed. They were presented in to tables. Tables were developed on the basis of questions asked.

Table 4.5
Practitioner of Management Accounting Tools in the Nepalese
Manufacturing Companies

S.N	Tools	Number respondents	Number of practitioner	Percentage
1.	Cost segregation into fixed and variable	15	13	87
2.	Break even analysis	15	12	80
3.	Standard costing	15	15	100
4.	Long term budgeting	15	7	47
5.	Short term budgeting	15	13	87
6.	Responsibility accounting	15	8	53
7.	Capital budgeting	15	10	67
8.	Ratio analysis	15	11	73
9.	Cash flow	15	15	100
10.	Activity based budgeting	15	1	7

Source: Field Survey, 2009

Table 4.5 shows 100 % of the manufacturing companies were practicing standard costing and cash flow. There after they use cost segregation (87%),

short term budgeting (87%), Break Even analysis (80%), capital budgeting (67%), ratio analysis (73%), responsibility accounting (53%), long term budgeting (47%) and only 7% of the manufacturing companies were practicing new management accounting tools:- Activity Based Budgeting. The main reason behind not practicing these new management accounting tools are lack of knowledge, lack of skilled manpower and lack of resources. Different management accountings are needed to carry out for planning, controlling and decision making process. Almost more than 50 percent of manufacturing companies are practicing cost segregation into fixed and variable, break even analysis, standard costing, short term budgeting, capital budgeting and cash flow. It was found that standard costing and cash flow were mostly practiced than others. It was found that annual budget was practiced by all company.

Table 4.6

Practice of Capital Budgeting for Making Long-Term Investment Decision

S.N.	Tools	No. of practitioner	Percentage
1	Pay back period (PBP)	5	33
2	Average rate of return (ARR)	3	20
3	Net present value (NPV)	5	33
4	Internal rate of return (IRR)	2	14
	Total	15	100

Source: Field Survey, 2009

Table 4.6 shows that 33% of the Nepalese manufacturing companies practice NPV and pay back period as practice of capital budgeting for long term investment decision where as 20% practice ARR and 14% practiced IRR for long-term investment. From the table it is cleared that NPV and PBP are the most practiced tools by manufacturing companies for long term capital budgeting or investment decision. The practice of capital budgeting for making long-term investment decision is depicted in figure 4.1

Figure 4.1

Practice of Capital Budgeting for Making Long-Term Investment Decision

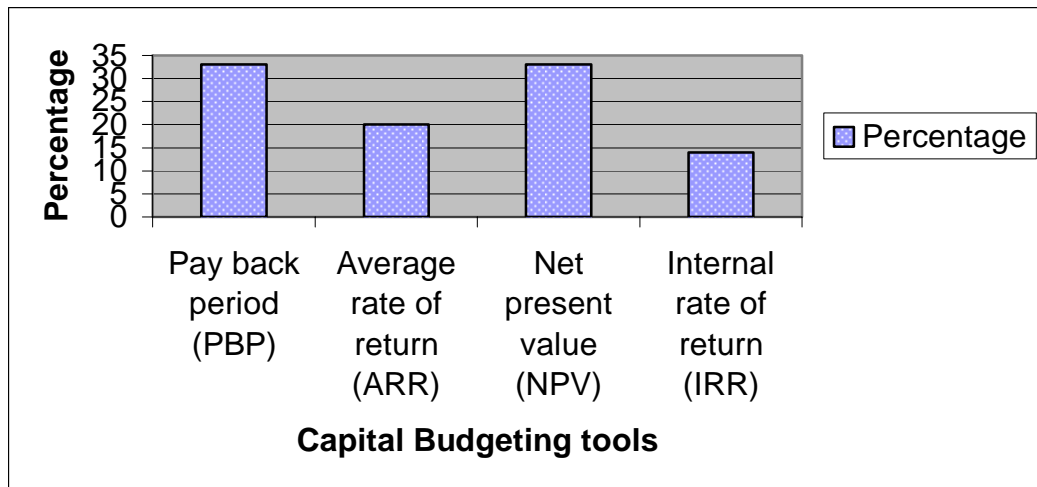


Table 4.7

Budget Practiced by Nepalese Manufacturing Company

S.N.	Tools	No. of practitioner	Percentage
1	Cash budget only	3	20
2	Operational budget	1	7
3	Overall master budget	11	73
	Total	15	100

Source: Field Survey, 2009

From the table 4.7 it was found that 73% of the manufacturing companies practiced overall master budget, 20% practice only cash budget and 7% practiced operational budget for operating activities. So it can be said that overall master budget was mostly practice tools in the Nepalese manufacturing companies. Budget practiced by Nepalese manufacturing company is depicted in figure 4.2

Figure 4.2
Budget Practiced by Nepalese Manufacturing Company

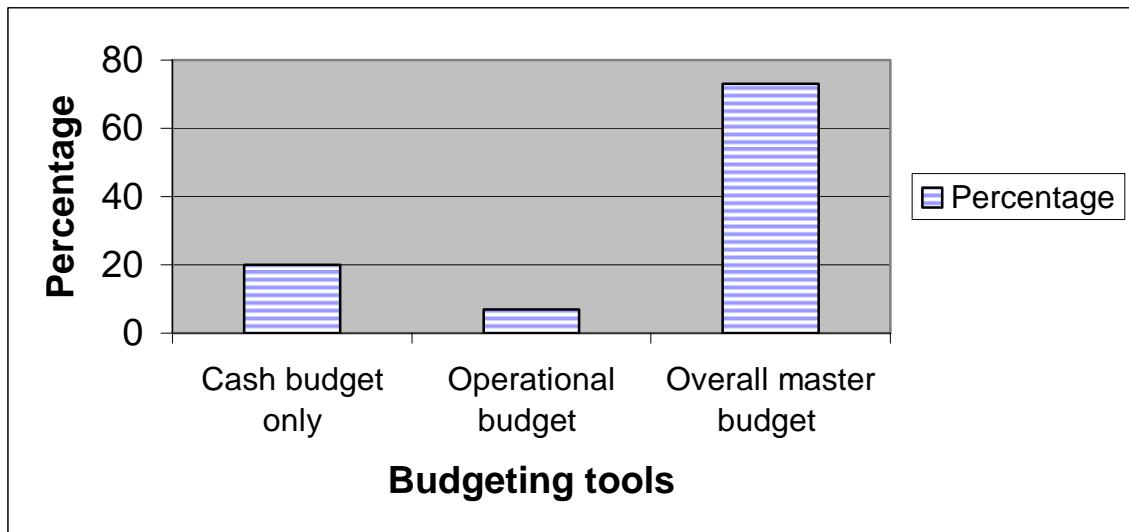


Table 4.8
Tools Practiced by the Nepalese Manufacturing Companies for Measuring and Controlling the Overall Performance

S.N.	Tools	No. of practitioner	Percentage
1	Profit or loss made by the company	9	60
2	Budgetary costing	1	7
3	Standard costing	4	26
4	Break even point	1	7
	Total	15	100

Source: Field Survey, 2009

Table 4.8 shows the tools practiced by the Nepalese manufacturing companies. For measuring and controlling overall performance 60% of the manufacturing companies use profit or loss as a basis while 26% of the companies practiced standard costing and only 7% use budgetary costing & break-even point as a basis. Measuring and controlling the overall performance of manufacturing company is depicted in figure 4.3

Figure 4.3

Tools for Measuring and Controlling the Overall Performance

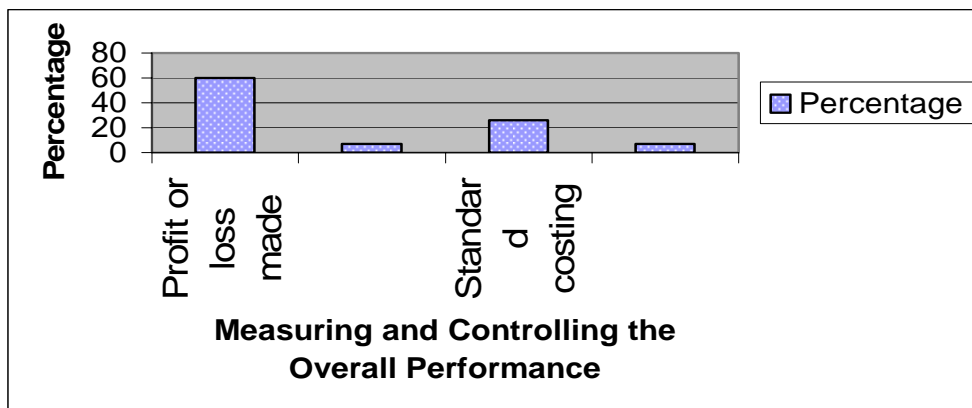


Table 4.9

Practice of Pricing Decision by Nepalese Manufacturing Companies

S.N.	Tools	No. of practitioner	Percentage
1	Cost plus pricing	9	60
2	Target return pricing	1	7
3	Going rate pricing	4	26
4	Break even pricing	1	7
	Total	15	100

Source: Field Survey, 2009

Table 4.9 shows the techniques practiced by the Nepalese manufacturing companies for pricing the product. From table it is cleared that 60 % of the companies practice cost plus pricing. There after they follow going rate pricing (26%), target return pricing (7%) and break even pricing (7%) for their product. Therefore, from the table it is cleared that cost plus pricing technique is widely used by Nepalese manufacturing companies. The reason behind practice of cost plus pricing is, most of the manufacturing company is established for profit motive and cost plus pricing give profit. Pricing decision by manufacturing company is depicted in figure 4.4

Figure 4.4
Practice of Pricing Decision by Nepalese Manufacturing Companies

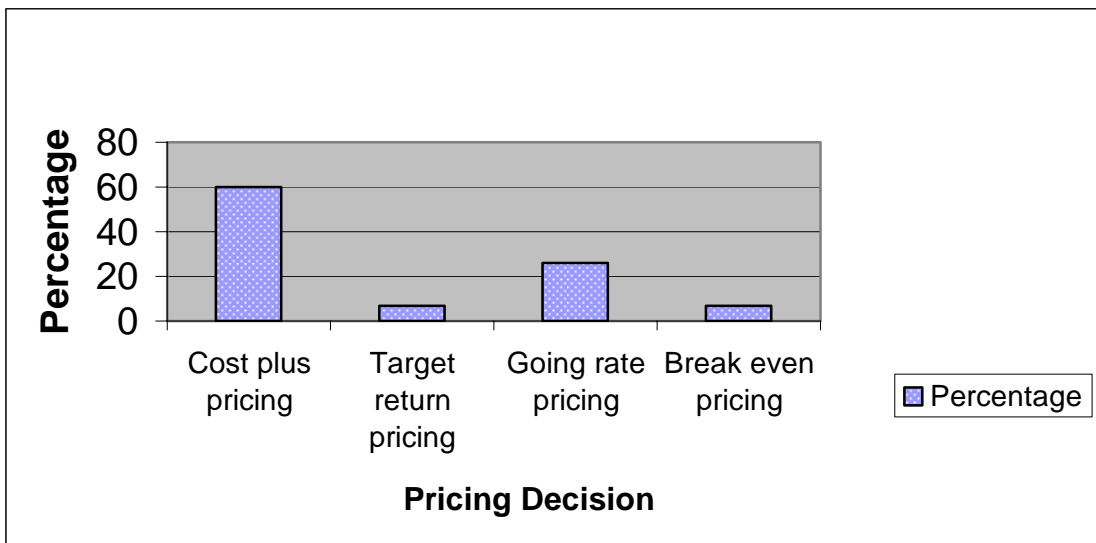


Table 4.10
Practice of Joint Cost Allocation in the Nepalese Manufacturing Companies

S.N.	Tools	No. of practitioner	Percentage
1	Unit or production method	7	47
2	Sales value methods	2	13
3	Negotiated basis	6	40
	Total	15	100

Source: Field Survey, 2009

Table 4.10 shows 47 % of the companies practiced joint cost allocation a unit or production basis. 40 % of the manufacturing firm had their negotiated basis of own method for joint cost allocation. Such as ratio method, department wise and 13 % of the manufacturing companies practice sales value methods for allocating joint cost. Allocation of joint cost by manufacturing company is depicted in figure 4.5

Figure 4.5

Practice of Joint Cost Allocation by Nepalese Manufacturing Companies

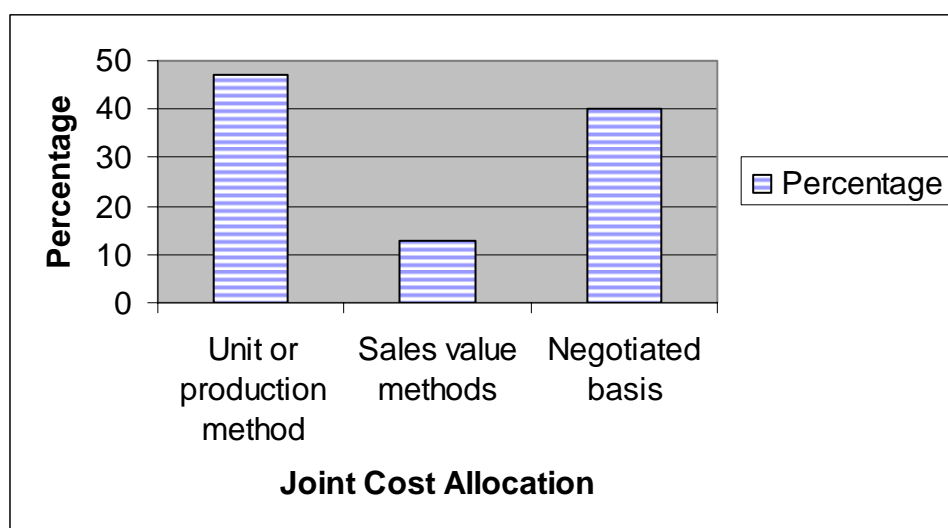


Table 4.11

Transfer Price Practiced by Nepalese Manufacturing Companies

S.N.	Technique	No of practitioner	Percentage
1	Market price based	4	26
2	Cost based	10	67
3	Negotiated	1	7
	Total	15	100

Source: Field Survey, 2009

From the table 4.11 it is cleared that 67 % of the manufacturing companies practiced cost base transfer pricing, 26% practiced market based transfer pricing whereas 7% practiced negotiated transfer price for their product. From the table it is found that cost based transfer pricing technique is widely used by Nepalese manufacturing companies. The reason behind practice of cost based transfer pricing is that it is based on real cost rather than market price based and negotiated technique. Transfer price practiced by Nepalese manufacturing companies is depicted in figure 4.6

Figure 4.6
Transfer Price Practiced by Nepalese Manufacturing Companies

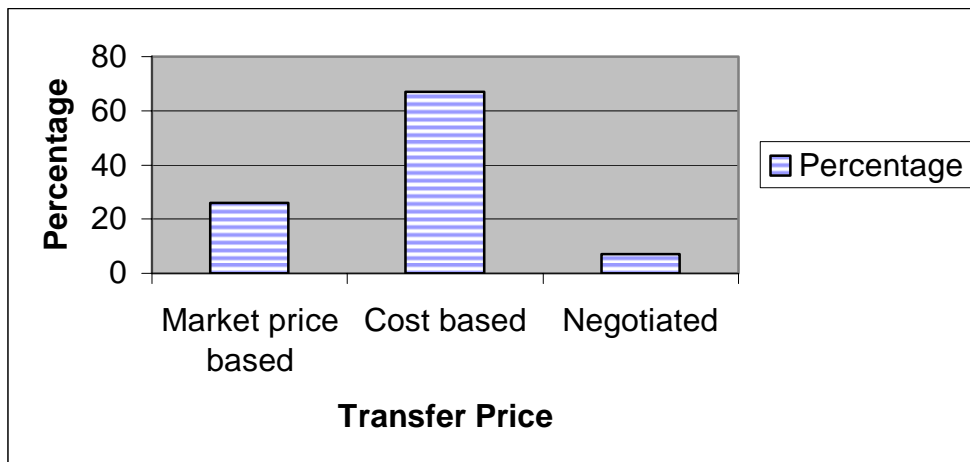


Table 4.12
Practice of Decision-making and Control Process in Nepalese Manufacturing Companies

S.N.	Techniques	No of practitioner	Percentage
1	Control before work has to be start	3	20
2	Control during the work period	11	73
3	Control after finish the work	1	7
	Total	15	100

Source: Field Survey, 2009

From the table 4.12, control during the work period is most practiced techniques for decision-making and control process in Nepalese manufacturing firm. There after, they followed control before work (20%), control after finish the work (7%) and control during the work period (73%). The reason behind practice of decision-making and control process during the work period is that it help to correct wrong decision help to follow right way while making decision. Practice of decision-making and control process practiced by Nepalese manufacturing companies is depicted in figure 4.7.

Figure 4.7
Practice of Decision-making and Control Process by Nepalese Manufacturing Companies

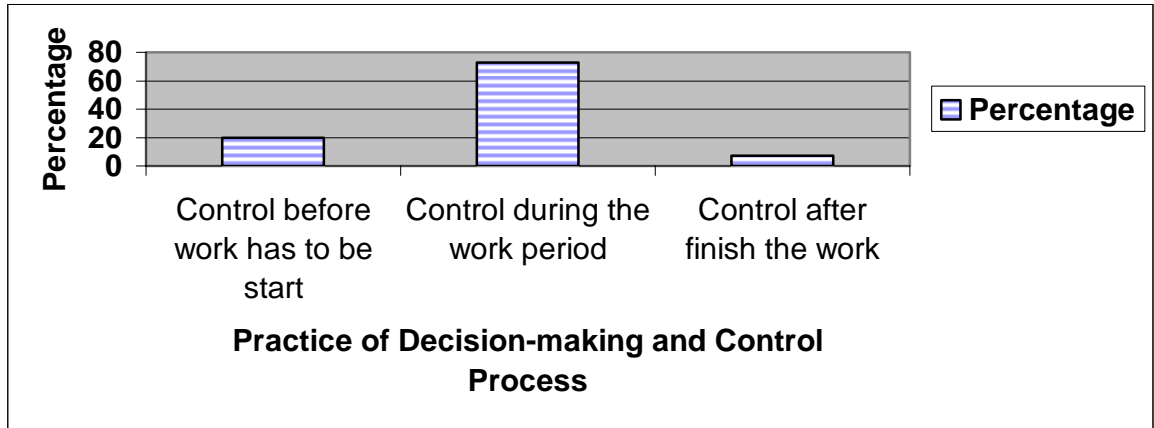


Table 4.13
Cost and Revenue Estimation Practiced by Nepalese Manufacturing Companies

S.N	Techniques	No of practitioner	Percentage
1	Historical base	12	80
2	Zero based budgeting	-	-
3	Market survey	3	20
4	Judgment analysis	-	-
	Total	15	100

Source: Field Survey, 2009

As regard to cost and revenue estimation practice of Nepalese manufacturing firm 80 % of the manufacturing companies practiced historical trend and only 20 % practiced market survey. No one company has practiced zero based budgeting and judgment analysis for their cost and revenue estimation purpose. Because zero based budgeting and judgment analysis technique are difficult to adopt and not suitable for manufacturing companies rather these are suitable and relevant for public enterprises. Cost and revenue estimation practiced by Nepalese manufacturing companies is depicted in figure 4.8

Figure 4.8
Cost and Revenue Estimation Practiced by Nepalese Manufacturing Companies

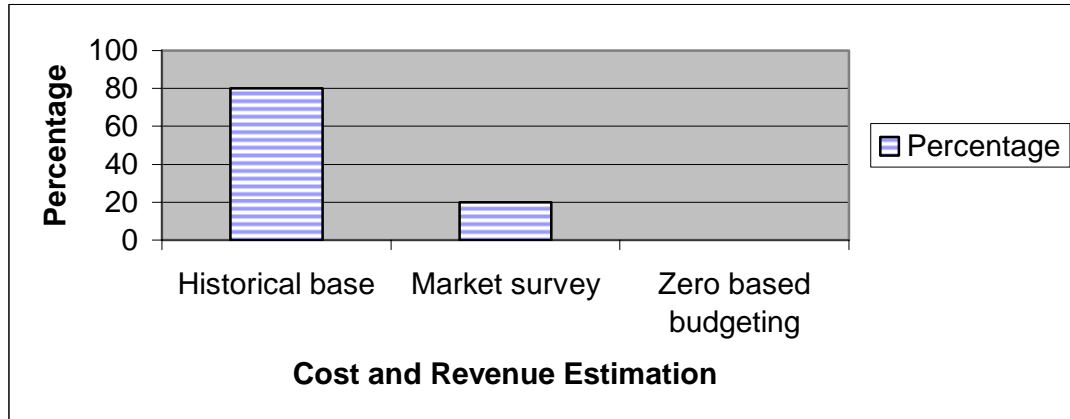


Table 4.14
Problem Faced by Manufacturing Companies in Decision-making

S.N	Problem	Companies view	Percentage
1	Lack of knowledge	-	-
2	Undefined objective	4	27
3	Infrastructure facilities	3	20
4	Lack of expert	8	53
	Total	15	100

Source: Field Survey, 2009

Regarding the present problem faced by Nepalese manufacturing companies in decision-making process majority of them (53%) face the problem of experts followed by undefined objective (27%) and infrastructural problem (20%). They denied the lack of knowledge in decision-making process. It was found that majority of companies faced the problem of expert in decision making process because there is lack of qualified and technical expert in Nepalese manufacturing companies. Problem faced by Nepalese manufacturing companies is depicted in figure 4.9

Figure 4.9

Problem Faced by Nepalese Manufacturing Companies

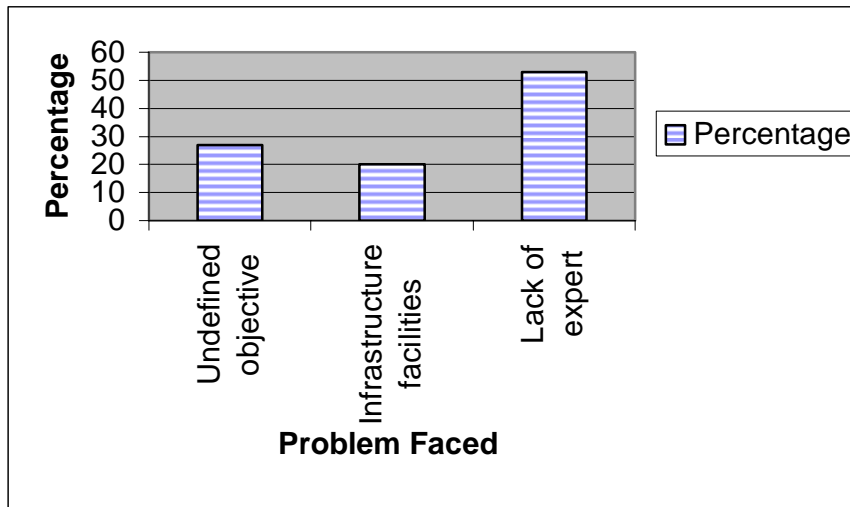


Table 4.15

Area where Management Accounting Tools is Effective in Practice to Make Strength of the Companies

S.N	Area	Companies view	Percentage
1	Production area	8	54
2	Marketing area	5	33
3	Financial area	2	13
	Total	15	100

Source: Field Survey, 2009

Table 4.15 shows the area where management accounting tools is effective in practice to make strength of the companies. The response in production area (54%) followed by marketing area (33%), and financial area (13%). It was found that majority of the company practice accounting tools in production area to make strength of the company. Area of management accounting tools to make strength of Nepalese manufacturing companies is depicted in figure 4.10

Figure 4.10
Area of Management Accounting Tools to Make Strength of the Companies

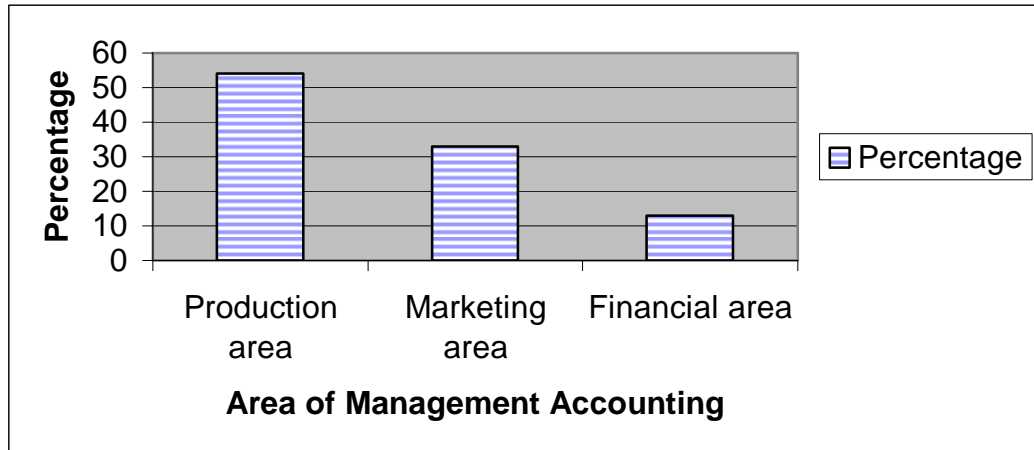


Table 4.16
Practicing for Issuing the Inventory by Nepalese Manufacturing Companies

S.N	Methods	No of practitioner	Percentage
1	Last in first out (LIFO)	-	-
2	First in first out (FIFO)	11	73
3	Weight Average	3	20
4	Specified items	1	7
	Total	15	100

Source: Field Survey, 2009

From the table 4.16 it is clear that majority of manufacturing companies (73%) practiced FIFO method for the issue of inventory while, 20% used weighted average and only 7% responded specified items for the issue of inventory. Hence, FIFO method was the widely practiced method for issuing inventory. Practicing for issuing the inventory by Nepalese manufacturing companies is depicted in figure 4.11.

Figure 4.11
Practicing for Issuing the Inventory by Nepalese Manufacturing Companies

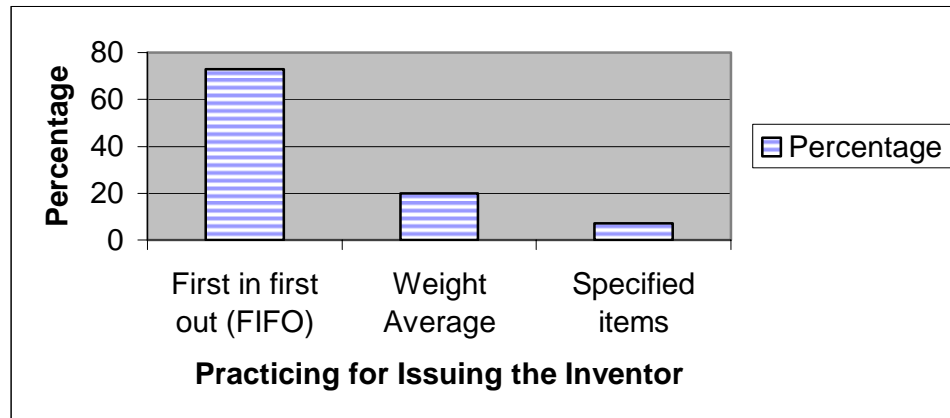


Table 4.17
Difficulties for Applying Management Accounting Tools in Nepalese Manufacturing Companies

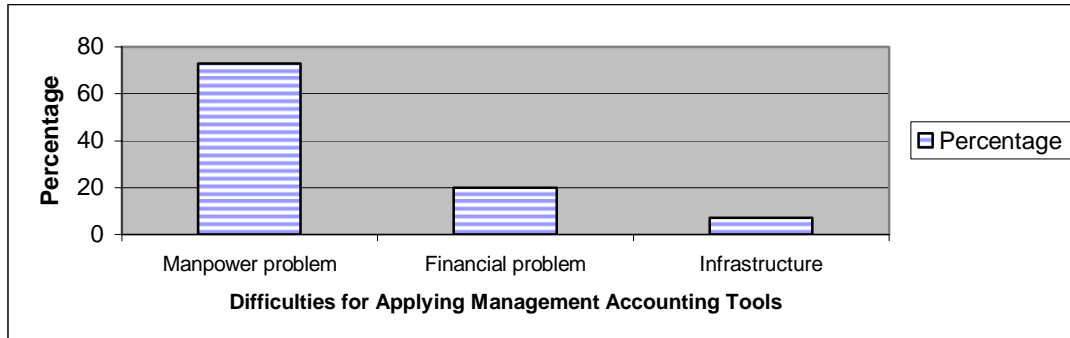
S.N	Problem	Companies view	Percentage
1	Manpower problem	11	73
2	Financial problem	3	20
3	Infrastructure	1	7
	Total	15	100

Source: Field Survey, 2009

As regards to difficulties for applying management accounting tools in Nepalese manufacturing companies majority of manufacturing companies (73%) faced manpower problem, 20 % faced financial problem and 7 % faced infrastructural problem. Hence, manpower problem is the great issues for applying management accounting tools in Nepalese manufacturing companies. Difficulties for applying management accounting tools in Nepalese manufacturing companies is depicted in figure 4.12

Figure 4.12

Difficulties for Applying Management Accounting Tools in Nepalese Manufacturing Companies



4.3 Major Findings of the Study

Based on the above analysis, the major findings are as follow:

- a) Both Bottlers Nepal Balaju and bottlers Nepal Terai has high operating leverage. Both Companies' Margin of Safety is low and it is fluctuating.
- b) Regarding the practice of management accounting tools in the Nepalese manufacturing companies, all of the manufacturing companies made study were practicing standard costing and cash flow. Large number of manufacturing company practice cost segregation into fixed and variable, short term budgeting and Break Even analysis, Ratio analysis, capital budgeting and responsibility accounting. Few of them practice long term budgeting too. Only 7% of the manufacturing companies were practicing Activity Based Budgeting. The main reason behind not practicing these new management accounting tools are lack of knowledge, lack of skilled manpower and lack of resources.
- c) Regarding the practice of capital budgeting tools in the Nepalese manufacturing enterprises, from the study it was found that 33% of the Nepalese manufacturing companies practice NPV and PBP. 20% practice ARR to make long term investment decision and only 14% practiced IRR for long-term investment. From the study it is cleared that NPV and PBP

are the most practiced tools for long term capital budgeting or investment decision.

- d) As regards to the type of budget they use, 73% of the manufacturing companies practiced overall master budget, 20% practice only cash budget and 7% practiced operational budget for operating activities. Thus it is cleared that overall master budget was widely popular tools in most of the Nepalese manufacturing companies.
- e) Regarding the tools practiced by the Nepalese manufacturing companies for measuring and controlling their overall performance. 60% of the manufacturing companies measure their performance on the basis of profit or loss made by them during the year while 26% of the companies use standard costing and only 7% use budgetary costing & break-even point for measuring the overall performance. Where as budgetary costing & break-even point both were followed by 7%.
- f) Regarding the techniques practiced by the Nepalese manufacturing companies for pricing the product. 60 % of the companies practice cost plus pricing, while 26 % of the companies practice going rate pricing and only 7 % of the companies practiced target return pricing and break even pricing for their product. Therefore, from the study it is cleared that cost plus pricing technique is widely used by Nepalese manufacturing companies.
- g) Regarding the joint cost allocation tools practiced by the Nepalese manufacturing companies. 47 % of the companies practiced joint cost allocation a unit or production basis, 40 % of the manufacturing firm had their own method for joint cost allocation. Such as ratio method, department wise and 13 % of the manufacturing companies practice sales value methods for allocating joint cost.
- h) As regards to the practice of transfer price in the Nepalese manufacturing companies, 67 % of the manufacturing companies practiced cost base transfer pricing, 26% of manufacturing companies practiced market based transfer pricing whereas only 7% of the manufacturing companies practiced negotiated transfer price for their product.

- i) Relating to the decision-making and control process followed by Nepalese manufacturing firm, 73% of Nepalese manufacturing companies practiced control during the work period, 20% practiced control before work has to be started technique, where as 7% practiced controls after finished the work. This indicated that majority of Nepalese manufacturing are interested in control during the work period.
- j) Regarding the cost and revenue estimation practice of Nepalese manufacturing firm, it was found that 80 % of the manufacturing companies practiced historical trend for cost and revenue estimation, 20 % practiced market survey and no one companies practiced zero based budgeting and judgment analysis for their cost and revenue estimation purpose.
- k) Regarding the present problem faced by Nepalese manufacturing companies in decision-making process, it is cleared that 53 % Nepalese manufacturing companies face the problem of expert in decision-making process, 27% face the problem of undefined objective and 20% face infrastructure problem in decision-making process.
- l) Regarding the area where management accounting tools is effective in practice to make strength of the companies, majority of Nepalese manufacturing companies (54%) selected production area. There after marketing and financial areas are suggested.

Regarding the practice for the issue of inventors in Nepalese manufacturing companies, majority of them use FIFO method. Few of them use weighted Most of cost and management accounting procedures were developed during the nineteenth and first quarter of the twentieth century. They further stated that before World War I some organisations were trying to develop and use accurate cost accounting systems to trace costs accurately to diverse lines of products. This evidence confirms that even the idea and logic behind activity based costing for designing an accurate costing method is not new.

- m) The application of non-accounting information (financial and non-financial) in management accounting, which has attracted considerable attention in the

last two decades is not new either. According to Johnson (1992:24), as far back as the first half of nineteenth century, businesses owners and managers were using non-financial information to control organisational operations. The idea of paying more attention to the working people and customers of organisations as a long-term source of profit also dates back to before the 1950s. Regarding the difficulties for applying management accounting tools in Nepalese manufacturing companies, majority of them responded that it is the manpower problem as well they faced financial problem and infrastructural problems for applying management accounting tools in Nepalese manufacturing companies.

CHAPTER V

SUMMARY CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Management accounting is concerned with the provision and interpretation of information which assists management in planning, controlling, decision making and appraising performance. Management effectively achieves organizational objectives through the efficient use of scarce resources. Environment is changing and future is uncertain. Uncertainty exists in all business situations and the information supplied by the management accountant must reflect the uncertainties and variability of the situation. Good management is effective weapon to reduce risk.

Corporate firm that carry out the economic activities. Economic activities are the backbone of the economy. They impact the whole economy. Every organization has limited resources. To utilize the limited resources in a better way, different tools and techniques have been developed. Among the various tools and techniques management accounting tools have proved beneficial in different aspects of managerial activities. The main objectives of management accounting are to help managers in overall managerial activities by providing information and helping in planning controlling and decision making. This acts as a strategic business partner in support of management role in decision making.

Management accounting primarily concerned with data gathering (from internal and external sources) analyzing, processing interpreting and communicating the resulting information for use within the organization so that management can plan more effectively make quick decisions and control the operations efficiently. Accounting data and information are used to represent the underlying economic activities of the organization, which include buying

materials, selling products, manufacturing and financing the organization. Accordingly, it is essential that the record of past performance and the Most of cost and management accounting procedures were developed during the nineteenth and first quarter of the twentieth century. They further stated that before World War I some organisations were trying to develop and use accurate cost accounting systems to trace costs accurately to diverse lines of products. This evidence confirms that even the idea and logic behind activity based costing for designing an accurate costing method is not new.

The application of non-accounting information (financial and non-financial) in management accounting, which has attracted considerable attention in the last two decades is not new either. According to Johnson (1992:24), as far back as the first half of nineteenth century, businesses owners and managers were using non-financial information to control organisational operations. The idea of paying more attention to the working people and customers of organisations as a long-term source of profit also dates back to before the 1950s.

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The application of non-accounting information (financial and non-financial) in management accounting, which has attracted considerable attention in the last two decades is not new either. According to Johnson (1992:24), as far back as the first half of nineteenth century, businesses owners and managers were using non-financial information to control organisational operations. The idea of paying more attention to the working people and customers of organisations as a long-term source of profit also dates back to before the 1950s. descriptive and analytical in nature. Surveys of different companies are made. Questionnaires

were distributed and table talks were made to gather information. Information is tabulated as per the requirement of the study.

From the analysis it is found that management accounting tools such as capital budgeting, annual budgeting cash flow and ratio analysis are widely used tools. Where as the tools like zero based budgeting, activity based costing, target costing are almost nil in the Nepalese manufacturing companies, reasons being the lack of information, lack of Infrastructure development and extra cost burden.

5.2 Conclusion

Management accounting has shift its emphasis from mere recording of transaction to their analytical and interpretative aspects as well as a change of perspective with rigorous to the objective of accounting, which now helps the management secure better results.

Nepalese manufacturing companies are in infant stage in practicing the management accounting tools. No one of the companies has a management accounting expert. They think management account is similar to financial accounting. The different types of management accounting tools which we have learnt are not being practiced by the Nepalese manufacturing companies. It shows the gap between theory and practice. Tools like capital budgeting, cash budget, ratio analysis and cash flow are in practice but application of new tools of management accounting is not in practice. New tools and techniques such as zero based budgeting, activity costing, target costing, and value engineering have been developed around the global but practice of it is almost nil. In, Nepalese manufacturing company lack of information, extra cost burden, and ignorance about management accounting tools are the main factors causing problem in the application of such tools. Beside these limited, market, nature of the business, size of the business, and extra cost burden were also the factors causing difficulties in the implementation of the tools.

Thus, it can be concluded that management accounting is a new thing and it is still in a developing stage. In the context of Nepal, the decisions that take place are usually based on intuition for behavior of the strategic manager. It can be said that the role of management accounting is yet to be recognized by Nepalese manufacturing enterprises.

5.3 Recommendations

Management accounting concept emerged to resolve the complexity that has appeared today's business decision making process. Its aim is to simplify the planning the decision making process and to provide support to achieve better organization outcomes. It is for every level of management because every manager has to be involved in some sort of business decision-making process.

Nepalese manufacturing enterprises should fit with the global environment. Best-fit managerial strategies should be developed. The managers should think in a global prospective. Information should be update for utilization of limited resources and achieving goal through cut throat competition. Application of advance management accounting tools can be a great helpful for this. The following are the recommendations based on the findings of the present research study to improve the application of management accounting tools.

- While examine the tools practiced by Nepalese Manufacturing Companies, it was found that capital budgeting, cash flow, ratio analysis and annual budgeting were most practiced. The zero based budgeting, activity based budgeting, responsibility accounting were less used or unused tools in Nepalese manufacturing companies. So, academicians should put effort to bring the new techniques and tools in this light.
- No one company has separate management accounting department and nowhere in the companies can find management accounting expert till now. So, training institute should be developed to produce such manpower. The information about the new and advance techniques should be conveyed

through different media. Similarly campaign should be carried out to increase awareness about use of such tools and techniques.

- Different type of seminars, workshop should be conducted for companies' manager in order to acquainted them with new tools and its usages and benefits.
- Both Bottlers Nepal Balaju and bottlers Nepal Terai has high operating leverage. Both Companies' Margin of Safety is low and also in fluctuating trend. So, margin of safety and P/V Ratio should be improved by increasing the selling price or by reducing variable cost by bringing improvement in the manufacturing process.

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