CHAPTER ONE

INTRODUCTION

1.1 Background of the Study:

In the age of Globalization, the contribution of corporate firms for the enhancement of economic activities plays a significant role. Each organization has the challenged to tackle with rapid development of information technology. The major problem for that is better utilization of available resources. To grab the competitive advantage management accounting tools have been proved beneficial in every aspects of management from its preliminary stage planning to decision making.

In most corporate firms, management accounting has been a strategic business partner in support of managements role's in decision, planning & controlling.

Organization is established to achieve certain objectives. To get desire result, role plays by management according is significant to protect the organization from unexpected happening. Management Accounting provides the reliable information for managerial decision. Therefore, management A/c is a analytical tool which coordinate financial cost A/c and support to manager for planning & decision making. It is used to describe the accounting method system and technique which coupled with special knowledge and ability assist management in its task of maximizing profit or minimizing losses.

It is reliable that management accounting technique is helpful not only to commercial institution, business, house but it has much to offer to the civil service administration in term of controlling cost, forecasting exp. and helping to improve overall productivity. Through financial management, thus it is useful to govt. for allocation of fund measurement of achievement & prioritization of expenses.

1.2. Statement of the Problem:

The enrichment of any company largely depends upon the planned management and management accounting provides technique to support management function. When we look the evident from annual report, most of the Nepalese organizations are not perform well. This has raised a great question about the Nepalese management. Whether they are proper implementing the management tools and techniques for the planning decision making and controlling function of the organization.

Here is the present scenario of management according in the listed companies of Nepal.

- ⇨ What types of management accounting tools and techniques are used in the organization development?
- ⇨ Are there any difficulties in the application of management accounting tools?
- ⇨ What are the areas for application of management accounting tools for the betterment of the organization?

1.3. Objectives of the Study:

Every research has been conducted to achieve some specific objective. This study was carries the following specific objectives:

- ⇨ To analyze the current scenario of management accounting in Nepalese listed company.
- ⇨ To access the problems in management accounting tools in Nepalese listed companies.
- ⇨ To identify and examine the area of implementing the management accounting tools & techniques for the betterment of Nepalese companies.
- ⇨ To provide suggestions & recommendation for applying management accounting tools & techniques.

1.4. Significance of the Study:

The present research work is the study of current scenario of management accounting in the listed companies in Nepal. This study will be significant in following ways:

- ⇨ This study will support to managers business person, accountant and interested parties for the application of management accounting techniques.
- ⇨ The idea of management accounting practice, tools and technique encourage to use in the decision making to those companies who have not yet used any tools.
- ⇨ This study explores the problem and potentialities of the selected companies that will be useful to the potential investors, lenders, manager and policy makers in Nepalese companies.
- ⇨ This study also examines the applicator of management accounting tools in Nepal.

1.5. Limitation of the Study:

The present research has following limitations:

- ⇨ The research was based mainly primary data except some cases.
- ⇨ The study was concerned with management accounting. It was not consider other financial aspects of the company.
- ⇨ The study was focused on some listed companies. Thus the finding might not be applicable to non listed companies in Nepal.
- ⇨ The study was concerned to current scenario of management accounting tools only. It ignores the implementer aspects of the tools.

1.6. Organization of the Study:

This study have been divided into five chapters. They are:

i. Introduction.

ii. Review of Literature.

iii. Research Methodology.

iv. Data Presentation and Analysis.

v. Summary, Conclusion and Recommendation.

The introduction chapter has cover role of management, accounting, statement of the problem, research hypothesis, research objectives, significance of the study and limitation of the study.

The second chapter has focus on review of literature. It will contain the conceptual framework and past research literature on management accounting.

The third chapter has deal with the research methodology to be adopted for the study consisting research design, sources of data, data gathering procedure and sample and methods of data analysis.

The fourth chapter has deal with presentation, analysis and interpretation of data. It will consists testing of hypothesis analysis of questionnaires, analysis of open and opinions and major findings of the research.

The last chapter has cover summary, conclusion and recommendation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Background:

A business enterprise today operates in a dynamic environment, which creates many facets of management problems. This environment is characterized by the presence of large-scale production, research, expansion, product improvement and diversification, widening of the market and cutthroat competition leaving a narrow margin of profit. Large-scale production has reduced the effectiveness of personal supervision and so has led to the decentralization of authority and responsibility. Today a great need has was felt for co-ordination and control. The tremendous industrial growth, marked by the increased volume, product improvement and diversifications and enhanced market area has posed a new challenge to financial planning. The existence of cutthroat competition demand has increased operating efficiency by modern techniques of control and supervision.

Due to complex environment management has to carry out its basic function of cost minimization of profit in an atmosphere of uncertainly. The old technique of management by intuition is no longer considered dependable on the situation in which the modern management has realized that a slight error in policy decision may mean either losing a business opportunities or going out of competitions. A second chance may not come or if it does, it may be costly or risky. It therefore, constantly strives to reduce the risk of mistakes in decisions making by keeping abreast of such quantitative information, which would help analyze its administrative action in order to reach judicious decision. It is here that accounting is of importance. Management, therefore, constantly strives to reduce the risk of making mistakes by looking for and analyzing relevant information by which it hopes to take judicious decisions and direct the administration better. (Kul Shrestha, 1996: 1)

2.2 Meaning of Definition:

Management accounting is an inexact science. Its usefulness depends to a very great extent upon the intelligent interpretation of the date made available. (Kul Shrestha, 1996: 12)

Management accounting is the term used to describe the accounting methods, systems and techniques, which coupled with special knowledge and ability assist's management or minimizing losses. It is essentially the application of managerial principle and know how to the planning development execution and control of the corporate plans. (Batty.1982: 1)

Management accounting system provides information to assist managers in their planning and control activities. Management accounting activities include collecting, classifying, processing, analyzing and reporting information to manager. Unlike the financial accounting information prepared for external constituencies such as investors, creditors, suppliers and tax and regulatory authorities management accounting information should be designed to help decision-making within in firm. Therefore the scope of management accounting extends beyond traditional measures of the costs and revenues from the transitions that have already occurred to include also capacity resources and extensive performance measures based on physical or non financial measures (Kaplan and Atkinson, 1998: 1)

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

Generally speaking any accounting, which renders valuable information to help management, may be called management accounting. It is the form of accounting, which enables a business to be conduced more efficiency. Management accounting is the presentation of accounting information in such a way as to assist management in the action of policy and day -to-day operation of undertaking. It is concerned with the presentations of accounting information and not with its presentations. Thus emphasis is laid don on the two aspects in management accounting.

- To present the accounting information in proper way before the management.
- Such accounting information being placed in a way as to assist management in its operations and functions (Gupta, 1995: 2-3)

Accounting has two aspects, one is "of management" and other is "for management" accounting is of management is a post decision exercise involving a proper record of transactions and its emphasis is on the various aspects of such a transaction as: formalism, periodicity, legality, centralization and accuracy. Accounting for management to take managerial decisions. It supports the administration and plays a positive role in helping the administration to decide on the allocation of resource and to measure performance. Truly management accounting can be defined as accounting for by and of management. It is an interpretative function. (Kul Shrestha, 1996: 8)

Management accounting is that branch of the accounting information system of business enterprises, which is used to describe the modern concepts of accounts as a tools of management in contrast to the conventional annual or half yearly account prepared mainly for information of properties, the object being to so expand the financial and statistical information as to shed light on all phases of the activities of organization. (Goyal and Man Mohan, 1997: 5)

2.3 Evolution of Management Accounting:

The last three decades have witnessed an almost startling change in the development of accounting from a mere device of recording and compiling of income and expenditure relating to past business events to a formidable instrument of forecasting planning regulating business or economic activity. Starting with systematic recording of transaction and costs subsequently supplemented by integration of financial and cost records the basic structure 3of traditional accounting has been enlaced by financial and cost control, enriched by budgeting and budgetary control, embellishment by production planning and control and engrafted by a system of reporting on performance.

In short, It has led to the emergence of what in technical language is known as management accounting the term management accounting is of recent origin even in USA where though a lot was heard about controller ship function, financial, control, operational control, management services, system work, methods and producers production planning and other methods connected with management till recently very few people looked open "Management accounting" as a subject distinct from accounting. This subject was discussed under the title "Budgetary control" and corresponding modernization of accounts at the international accounting congress held at Amsterdam. So far as evidence goes, the term management accounting was first coined and used by British team of accounts that visited the United States in 1950 under the auspice of Anglo-America productivity council. Since then the term has become quite familiar in U.S.A as well as in other countries. (Goyal and Man Mohan, 197: 6-7)

2.4 Different Between Cost and Management Accounting:

Management accounting is very closely linked to cost accounting; so closely in fact that it is difficult to say where cost accounting ends and where management accounting begins. Cost accounting simply aims to measure the

performance of department' goods and services. However, management accounting is much more compared to it. (Chadwick, 1996: 8)

Management accounting and cost accounting are different in their objective the primary objective of cost accounting is to ascertain the cost accounting is to ascertain the cost of production as well as to control the same after careful analysis where as management accounting aims to supply the accounting information to the management for taking proper decision. In cost accounting accounts are prepared according to pre-determined standards and budget. But in management accounting reports are submitted to the budgets. As a result, 'past error' a defect may be rectified and there by efficiency is improved. (Paul, 1994: 8)

2.5 Differences between Financial Accounting and Management Accounting:

Management accounting and financial accountings can be differentiated on the ground of its use, principles statutory obligation, Presentation of reports, presentation of information, center of focus, methodology etc.

Financial accounting systems serve the interest of the various categories of persons including external users (i.e. Investors, Creditors, etc) where as management accounting serves the interest of internal users (i.e. management)

Financial accounting is prepared and presented on the base of generally accepted accounting principles (GAAP) and standard rules. But the generally accepted accounting principles and standards rule and considered in the case of management accounting. (Kul Shestha, 1996: 6-7)

Financial accounting is statutory i.e. it is a must and the accounts must be prepared as per companies act and at the same time audit of such accounts is compulsory. But management accounting is optional and audit is not

compulsory. It presents annuals report based on historical information where as greater importance is given to each to the separate units of the enterprises in the case management accounting. Transactions relating to nominal accounts; Real accounts and personal accounts are to be recorded in financial accounting but this classification is not followed in management accounting where in management accounting where in information is collected and analyzed according to responsibility center or cost center. Management accounting is related with the whole affairs of the concern the capacity for making profits or losses and the expectation for the future. In order to discharge its duties properly, it has to depend on both financial and cost accounting. Therefore management accounting may be regarded as the expansion of these two formed VIJ financial accounting and cost accounting. (Paul, 1994: 6-9)

2.6 Evolution of Accounting in Nepal:

The history of account keeping in Nepal by government is very old. Mandev 1st the king of Nepal in Lichhavi period had circulated first coin called "mananka coin" during the period 464- 491 A.D. Similarly King Mahendra Malla had circulated the coin named "Mahendra Mally" in Malla period of Nepal. This seems to be the main step of record the national transactions in a proper way and manner. It is said that few number of financial transactions used to perform in Lidhhavi and Malla periods. It proves there was a certain from of accounting record transactions. (Auditor Generals Office, 1962: 1)

Written records of accounting have been traced back after 18th centuries in Nepal. After the unification of the nation in 1768 (1825 B.S) by the great king Prithivi Narayan Shah, the chief of the district level solders used to keep the accounts of the government offices. (Giri, 1994: 155)

In 1841 a book called "Lal Dhadda" was created for recording things about land management (Kitab Byabastha). Another book called "Mthfhadda" was used. These two records were important steps in the history of accounting in

Nepal. Again, after long gap in 1868 (1925 B.C.) an office called "kitab khana" was established for recording the salaries paid to government personnel whishes still in use. In the process of development of accounting in 1879 (B.S. 1936) kharidar Gunawanta a senior official that time propounded "Syaha sresta Pernali" which was an advanced from of accounting and used up to 1965-66 fiscal year. A "Faram shresta Parnali" was introduced in 1911 (1968 B.S) especially to use in Terai Region. (Thapa, :71)

After the over thrown of Rana Regime, the first budget system was started in Nepal in1951 (21st Magh 2008 B.S). The auditor general's office was established in 1959. Before, it there was kumari chock, and office to do the audits jobs. IN 1960 (2017 B.S) the "Bhuktani shreta prnali" was adopted which was little bit based on the double entry bookkeeping -system. In 1960 (20th Magh 2017 B.S.) account committee was formed to study and analyze the problems of accounting in Nepal. After detailed study of 288 days the committee made a report to introduce a new accounting system. His Majesty the King Mahendra recognized it in 1961 (on 2nd Chaitra, 2018 B.S.) and it became a new accounting system of H.M.G of Nepal. But it was put into practice only from the fiscal year 1962/63 for the budget appropriation and from 1974/75 for the revenue it is used.

Currently financial accounting based on double entry book keeping I followed recording transactions and is government ministries, department, and offices, government accounting is followed. It is also based on double entry book keeping system. (Thapa, 1994: 71)

Besides, controlled accounting seemed to be used through the implementation of management accounting technical to plan revenue and control expenditure. Since 2008, faint practice of management accounting seemed in Nepal.

2.7 Background and Management of Corporate Firms:

Dictionary meaning of the corporate is the company in gamut. Corporate refers to the whole company. (Collin, 1997: 2)

The dictionary meaning of "Firm" is business. (Collin, 1997: 2) Based on these meaning of two separate terms if combined together what can be understood that company carrying out business activities are the corporate firm. Thus business companies are the corporate firms.

In Britain, the legal corporate firm is desired as the joint stock company while American law terms it the "Corporation", Although there legal forms may be referred to simply as companies or corporation. (Scott, 1997: 2)

Corporate firms are the central institution of contemporary society; it is not only a peculiar economic production. It id the corporate firms which argues that Taylorirm and Sloanism have created three distinct social productive groups whose several relationship constitutes the modern corporation companies. Social and historical views the modern corporate firms as the dominant institution of the past era and has been a major factor in reshaping the present century. It is the institution of world Historical significant no less than the old Chinese animate the classic roman army and even the Catholic Church. It is the dynamic social productive structure that historically, empirically and functionally distinguished the modern corporate firm from previous productive institutions which itself a class structure of production. The emergence of classes and their relationship has transformed modern society simultaneously destroying pre corporate society and creating a new world. Corporate society emerges from the womb of pre-corporate society. It and its classes then slowly grow as to entirely replace what had been before. It conquers the older society but as an heir not a foreign hoard. Corporate firms thus are the conveyer of modern society and new world. (Jain and Narang, 1991: 51-79)

2.8 Companies in Nepal:

Companies are established with certain objectives under particular act and activates as an artificial person. (Jain and Narang, 1993 v/1)

So far in Nepalese concern, business firm/houses established under company act 2053 are recognized as company. Thus company refers to all those companies, which are establishment under company act 2053. The company needs to be registered in office of register. It may be private limited company or Public limited company. The company, which are not allowed to float share in the primary market and should have maximum no of 50 shareholders known as private ltd company. The company enjoying the facility of issuing share to public for fund raising, having as least seven shareholders with no bar in maximum number of share holders are public limited company. On the basis of listing, public ltd. company further can be classified into listed companies. On the basis of listing, public ltd. company further can be classified into listed companies and non-listed companies. All the listed companies enjoy the share transaction in the secondary market. (Company act. 2053)

Total listed companies have reached to 143 (One hundred forty three) by Dec. 31. 2008. These listed companies have further been categorized into the following class: (Annual Report Of Nepal Stock Exchange Ltd.: No 127-129)

- Commercial banks
- Manufacturing and processing
- Hotel
- Airlines
- Trading
- Finance and Insurance
- Others

2.9 Evolution of Corporate Firm:

The modern corporate is the dominant institution of the present era and has been a major factor in reshaping the present century. It is not only a peculiar

economic organization but also a class structure of production. In it a corporate classes. A top management that forms the most important capitalist class, a middle managerial professional and technical class and the modern working class.

A top management presides over the strategic direction of capital and investment and in that fashion provides broad guidance to a much larger class of middle and lower management who provides professional services to it. Top management class and middle management class compel to a corporate working class to carryout task designed directed, combined and place by the middle group. This three-termed relationship is called corporate firm.

Three striking development that emerged in the last decades of nineteenth century bear importantly on the origin of the corporation and have played a significant role in the evolution of corporate firm. These are the first emergence of another greater and very different industrial and technological revolution, Next the re-emergence of imperial rivalries among all the great powers and third and perhaps most important the success of Maxian socialism in the form of the social democratic movement.

Besides changes taken place within the industry at different corporate classes such as top management developed in to capitalist formation, middle manager changed into the bearer of technology into the society homogeneous working class development impacted on the development of corporate firm. (Dermot, 1991: 47-63)

2.10 Contribution of the Corporate Firms in the National Economy:

People have witnessed the shape given to their lives by business enterprises. The products and services that people use the in the course of their routine

daily activities the food that they eat, the newspaper that they read, the cars that they drive, the houses that they live in and so.....on are all today the products of mass market business enterprises. These commodities can be produced for the people only other enterprise produces the boilers, printing presses, machine tools and bricks that required in their production. The majority of people in paid employment are paid by these same business to work in the factories, shape and offices that produce these goods and production and consumption of goods requires the use of cash, credit cards, and bank account that are operated by large banking enterprises. All of the people whether as consumer or worker are inextricably tied into a global web of financial connections that stretch from the corner of the shop to the Tokyo money market. (Scott, 1997: 1)

Role played by industrial sector in repaid economic development of the country is significant. Development in industrial sectors is important in mitigating the problem of growing unemployment and poverty. In Nepal 80% people earn their livelihood from agriculture and the contribution of the manufacturing sector to GDP is estimated to be around 10%. In the FY 2007/2008 the GDP rate is estimated to records a growth rate of 5.8%. Agriculture and non-agriculture sectors are expected to register the growth rate of 4.0% and 6.9% respectively. As for the last FY GDP Grew by 6.4% of which agriculture and non-agriculture sectors posted the growth rate of 5.0% and 7.4% correspond. This indicates the contribution on GDP from non-agriculture sector is significant enough. During the FY 2007/2008, the contribution that of non-agriculture sector is 61.9% where as agriculture sector is 38.1. (Economy Survey, FY 2007/2008: 11)

High population growth rate has hindered up-employment and under employment abatement effort. The population has been growing at the rate of 2.4% per annum and 300000 labor force enters the labor market every year for

employment. Under employment remains pitched at 47% if the population. As the employment opportunities continues to be out of line with the increase in labor force, poverty has accentuated with the investor - Friendly policy pursued by the government, new employment opportunities have been generated in larger industrial establishments, bank and finance companies insurance companies, and Hotel and Airlines services. This has helped contain the problem of unemployment to a significant extent. (Economic Survey, 2007/2008: 36-43)

Out of total economically active population 5.8% population are consumed by manufacturing sectors, 5.5% are by trade restaurant and hotel. Huge mass of population is getting employment from manufacturing and other business enterprises.

Loan disbursement to the industry and commerce is Rs. 4981 million and Rs. 36086 million in the mid March of FY 2007/ 2008 that of in the agriculture is Rs. 9852.0. Tax contributed by these sectors to the government in the FY 2007/2008 is respectively Rs. 9780.0 million showing a significant contribution of corporate firm in the national economy. (Economic Survey, 2007/2008)

Contribution of corporate firms are in up-lift of the level of standard of living of people creating employment opportunities, similarly providing helping hand to the government through regular payments of tax and com in the main stream of government in alleviating poverty through different measures.

The Table 2.1 shows the proportion of economically active population involved in various sectors of economy.

Table No. 2.1

Proportion of Economically Active Population

Involved in various Sectors of Economy

S. N.	Economic Sector	2001 Census		Labor Survey	
		Active Population	%	Active Population	%
1.	Agriculture, Fisheries & Forestry	591788	81.2	7203000	76.11
2.	Mining and Quarrying	2361	-	8000	0.1
3.	Manufacturing	150051	2.0	552000	5.8
4.	Electricity, Gas and Water	11734	0.2	26000	0.3
5.	Construction	35658	0.5	34400	3.7
6.	Trade, Restaurant &Hotel	25612	3.5	522000	5.5
7.	Transport, Communication & Storage	50808	0.7	1350000	1.4
8.	Finance & Real State	20847	0.3	51000	0.5
9.	Community &Social	752019	10.2	614000	0.5
10	Other	28004	0.4	8000	0.1
11	Undefined Sector	70298	1.0	-	-
Grand Total		7339580	100	9463000	100

(Source: Statistical Pocket Book-2001 CBS Nepal labor Force Survey 2001CBS.)

2.11 A Brief Review of Management Accounting Tools:

Management accounting as a quantitative approach helps to discharge function like planning, organizing, staffing, direction and control properly and efficiently. (Paul, 1994: 5)

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

2.11.1 Cost Concepts and Classification:

Cost may be defined as the sacrifice of giving up of resource for a particular purpose. Cost of frequently measured by monetary units that must be paid for goods and services. Costs are grouped in different ways to help managers make decisions such as Evaluating subordinates and sub units of the organizations expanding or deleting Equipments. To aid decisions managers want the cost of something. This something is called a cost objective or cost object which may be defined as any activity for which a separate Measurement of cost is desired (Horngreen, 1991: 65)

2.11.2 Cost Classification:

Cost classification is the process of grouping is the grouping costs according to their common characteristics. The same cost figure sometime can be classified according to different ways of costing depending upon the purpose to be achieved and requirements of particular concern. The important ways of classification are; (Jain and Narang, 1992-1.48)

- By nature of Element
- By functions
- As Direct or indirect
- BY variability
- BY controllability
- By Normality
- By capital or revenue
- By time
- According to planning and control
- For Management decision

In management accounting with the purpose of assisting managers in managerial task, cost are classified on the following Ground; (Garrison, 1985: 27)

(A) Cost Relating in Income Management:

i) Product Cost:

The cost which are better matched against products than they are against period of time are product cost. Cost of this type consists of the cost that is involved in the manufacturing of goods and includes direct material, direct labor and manufacturing overhead. These costs are viewed as "Attaching" To units of products as the unit sales takes place. At that time, the costs are released as expenses and matched against sales Revenue. (Garrison, 1985: 30)

ii) Period Cost:

Fixed costs are costs, which vary with the passage of time and not with volume of production. Rent, insurance, Salary type expenses vary pari passu with time period. (Khan and Jain, 1993:144)

iii) Absorbed Cost and Unabsorbed:

Fixed cost help create value in the product. The benefits of fixed cost will lapse with the passage 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 uncharged, is known as unabsorbed cost. (Moore and Jacdicke, 1972: 263-69)

iv) Expired and Unexpired Cost:

An expired cost is one, which cannot contribute to the production of future Revenues. In contrast UN expired cost is one, which can contribute to the production of future revenue are Unexpired cost e.g. of un expired cost is inventory, which can be sold in subsequent years and will influence total Revenue. (Khan, 1993; 195)

v) Joint Product Cost and Separable:

Joint Product costs are the cost of a single process or a series of processes that simultaneously produce two or more products of significant sales value. Such costs are not attributable to different individual products until after a certain stage of production known as the split off point. Separable cost that can be attributed exclusively and wholly to a particular products, Process, division or department. (Horngreen, 1991: 118)

(B) Coat Relating to Profit Planning:

Profit Planning is quite concerned with decision-making. Planning deals with the future cost are relevant cost in profit planning. The relevant cost concept is:

i) Fixed Cost:

Fixed costs are costs associated with those inputs that do not vary with changes in volume of output or activity within specified range of activities or output (Relevant range). Fixed cost thus remains constant whether activities increase or decrease within a relevant range. Like other cost, fixed cost is subject to change over a period of time. As fixed costs are unaffected by volume changes any increase in volume implies that the costs will be allocated to greater number if units consequently fixed cost per unit will become progressively smaller as volume increases and vice versa. (Kaplan and Athinson, 1998: 13)

ii) Variable Costs:

Variable costs are the cost that tends to vary in direct proportion or in one to one relationship to changes in production activity, sales activity or some other measures of volume of cost driver. The cost of these inputs increases decrease in proportion to increase and decrease in volume or cost driver. (Horngreen, Foster and Datar, 1990: 29)

iii) Semi Variable Cost / Mixed Cost:

All cost which are neither perfectly variable nor absolutely fixed in relation to volume changes are semi variable cost. Semi-variable costs are also known as mixed cost as they consist both of fixed costs and variable cost. The fixed component of mixed cost consist the cost providing capacity where as variable component using the capacity causes. The first part won't be affected by the changes in the volume/ activity. But the later part will be affected by the change in activity. Ideally, semi-variable costs should be bifurcated into fixed and variable cost as the functions of profit planning, cost control and decision-making assume that costs are either variable or fixed. (Khan and Jain, 1993: 151-152)

iv) Methods of Mixed Cost Segregations:

The methods prescribed for segregating mixed costs are:

a. The Two Point Method (High-Low Method):

As the name suggest by, this method consider two level of activity, to bifurcate the cost. It consider the output at different levels i.e. High or low points is compared with the amount of expense incurred at these different periods. (Jain and Narang, 1992: 2,216)

b. Least Square Method:

This method follows regression equation to segregate mixed cost into fixed and variable. (Khan and Jain, 1993: 157)

c. Analytical Method:

This method also known as "degree of variability" technique because the genesis of this method lies in measuring the extent of variability of costs on a careful analysis of each item to determine how far the cost varies with volume; variable overheads under this methods computed as follow.

Variable Overhead = Budgeted Mixed Overhead × Degree of Variability (Brown and Howard, 1969: 249)

v) Future Costs:

Future costs are relevant costs in 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. As they deal with a future period, they are estimated costs based on expectation. Future cost can be planned for and planned to be reduced if they are too high. This is not possible with historical cost. (Khan and Jain, 193: 158-159)

vi) Budgeted Cost:

When an operating system plan involving future cost 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 elements in that they provide the basis for meaning the actual performance of different cost center and therefore constitute an importance input of responsibility accounting. (Khan And Jain, 1993: 158)

(C) Cost Concept for Control:

i) 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 exceed to budgeted cost. For e.g. Purchase manager will be responsible for the purchase cost will be accountable incase actual cost budgeted cost. The budgeted coat is prepared by the head of management known as manager, and over which he has control to incur. (Khan and Jain, 1993: 160)

ii) Controllable and Non-Controllable Cost:

An item of cost is controllable if the amount of cost incurred in a responsibility centre is significant influenced by the actions if the managers of the responsibility centre otherwise it is non controllable. (Anthony and Welsh, 1977: 451)

iii) Direct and Indirect Cost:

Different types of cost in a responsibility can be categorized as direct and indirect. Costs, which can be traced into the particular department of product at direct cost. Those cost which are not locomoted into any particular department product of units so indirect cost. E.g. salary of manager is the common cost for all the departments. Such coat should be allocated to different units, subunits, departments and product as per the activity. (Cost Driver). (Decoater, 1979: 10)

D) Cost of Decision Making:

Cost for decision making are:

i) Relevant/Irrelevant Cost:

Cost which is influenced by a decision is a relevant cost and hence is important for decision makers cost which is not affected by a decision is irrelevant cost. Such a cost id of no relevance to decisions makers. These costs should be ignored while making decisions. Committed fixed cost is irrelevant that of additional fixes costs are relevant. Relevant cost in true sense is incremental cost. Most of the variable cost is relevant cost for decision maker. (Khan and Jain, 1993: 162)

ii) Differential Cost (Incremental/Decrement 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 increment cost. Any cost which increase between the alternatives are incremental coast which decrease is decrement cost. Both incremental and decremented costs are relevant is decision making purpose. (Garrison, 1985:43)

iii) Out of Pocket Cost and Sunk Cost:

Cost, which requires current or future cash expenditure as a result of a decision, is labeled as an out of pocket cost. In contrast, those cost which have already been incurred in the past and will not require any current cash expenditure is

suck cost. Suck cost is the result of the past committed. They should be ignored while making decision while out of pocket cost is relevant for decision-making purpose. Mostly Sunk Cost deserves fixed behaviors. But in same situations, sometimes-sunk cost might be of variable while out of pocket cost bear to be fixed. (Decoster, 1979: 10)

iv) Opportunities Cost and Imputed Cost:

An opportunity cost can be defined as the potential benefit that is lost or scarified when the choice of one course of action requires the going up of an alternative course of action. Opportunities cost is not usually entered on the book of organization but it is a cost that must be expertly considered in every decision that a manger makes has come opportunity cost attached to it. In short, every alternative course of action, the good features must be given up along with the bad. The net good features. In rejecting a course of action, the good features must be given along with the bad. The net good features of rejected alternative become the opportunity costs of the alternative that is selected. (Garrison, 1985: 4)

2.12 Cost Allocation and Apportionment Methods:

2.12.1 Method of Allocation:

There are two popular methods of allocating the coat of service department. They are:

(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 service to other department that provides the greatest amount of service to other departments. After it costs have been allocated, the process continues step by ending with the department providing the lease amount of services other service departments.

(B) Direct Method:

Direct method of cost allocation ignores the costs of services between departments and allocates all service department costs directly to producing department. (Horngreen, 1991: 38)

2.13 Product Costing Method:

Two popular methods drawn for product costing are variable coating (Direct/ Marginal Coating) and Absorption costing (Fixed Costing). Variable costing and absorption costing like process, operating, batch or job costing rather they are the tools or technique of product costing. (Khan and Jain, 1993: 345)

2.13.1 Variable/Direct Costing:

Variable coating more accurately perceived as direct coating or marginal coating as it applies only the variable production cost to the product. This coating costing approaches that fixed manufacturing overhead is regarded as an expired cost to be immediately changed against sales not as an un expired coat to be held back as inventory and changed against sales later as part of coat of goods sold. Further more: the direct material and labor. It also includes on indirect cost the variable manufacturing overhead as a part of product as a part of product cost. (Horngreen, 1991: 539)

2.13.2 Absorption Costing:

Contrast to variable costing. Absorption costing assumes that fixed along with the variable cost constitute to the product cost. It absorbs all cost necessary to production. It considers fixed manufacturing overhead as apart of product cost. (Horngreen, 1991: 539)

2.14 Use of Variable and Absorption Costing:

Absorbing costing is more widely used than variable costing. However, the growing use of the contribution approach in performance measurement and cost analysis has led to increasing use of direct coating for internal reporting purposes. Over half the major firms in the United States use direct costing for

some internal reporting and nearly a quarter uses it as the primary internal format. In contrast neither the public accounting profession nor the internal revenue service approves of direct costing for external reporting or tax purposes. Thus all firms use absorption costing for their reports to shareholders and tax authorities. (Horngreen, 1991: 538-539)

2.15 Cost-Volume-Profit Analysis:

Cost-Volume-Profit Analysis is management accounting tool to a show relationship between the ingredients of profit planning. Profit planning is the function of the selling price of unit sold of product units sold. The entire gamut of profit planning is associated with CVP inter-relationships. A widely used technique to study CVS relationship is break-even analysis. Break-Even analysis is concerned with the study of revenues and costs in relation of sales at which the firm's revenues and total costs will be exactly equal (or net income is zero). Thus the break-even-point (BEP) may be defined as a point which the firm's total revenues are exactly equal to total costs, yielding zero income. The "No profit" "No loss" point is break-even point or a point or a point at which losses cease and profits begin. (Khan and Jain, 1996: 494)

2.16 Budgeting:

A budget is the detailed 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 uses of budget to control firm's activities are known as budgetary control. (Garrison, 1985: 297)

Budgeting as a tool of planning is closely related to the broader system of planning in an organization. Planning involves the specification of the basic objectives that the organization will pursue and the fundamental policies that will guide it. (Khan and Jain, 1993: 573)

2.17 The Planning Process

In operational terms planning process involves four stages:

2.17.1 Objectives:

The first stage in the planning and control system is setting the objectives, which are defined as the broad and long range desired state or position in the future. They are motivational or directional in nature and are expressed in qualitative terms. Examples of fundamental objectives are identification of the line of business, customer satisfaction, employee welfare and so on. Thus they are the basic policies. (Welsch, Hilton and Gorden, 1992: 75)

2.17.2 Goals:

The second stage in the planning process is specifying the goals. The terms goals as an element in planning represents targets, specified in quantitative terms to be achieved in a specific period of time, Timing of introducing new products, purchase of new plant as machinery and expected rate of return are examples of time and quantity oriented goals. (Welsch, Hilton and Gordon, 1992: 77)

2.17.3 Strategies:

The next step involves laying down the strategies. Strategies focus on how they outline a plan of action for the enterprise. In the development of basic strategies for the enterprise, executive management must focus on identification the long-range sources of the enterprise critical areas should be pinpointed through evolution of relevant variables. (Khan and Jain, 1993: 575)

2.17.4 Budgets/Plan:

The final step is the preparation of budgeting /plan. Basically budgeting is the periodic planning to implement the alternative during a particular fiscal period, usually one year. It converts goals and strategies into annual operating plan.

2.18 Element of Budget:

The essential elements of budgets are:

i) Plan:

The first ingredient of a budget is its plan. A plan is an expression partly of what the management expects to happen and partly of what the management intends to happen. (Fregmen, 1976: 157)

ii) Operation and Resources:

A budget is a mechanism to plan for the firm's operations and resources the operations are reflected in revenue and expenses. The planning of the various assets and the sources of capital to finance these assets. (Khan and Jain, 1993: 84)

iii) Financial Terms:

Budgets are prepared in financial terms i.e. in terms of monetary value such as the rupee, dollar and so on. It is because monetary unit is a common denominator. (Welsch, 1992: 84)

iv) Time:

A budget relates to a specified period of time, usually one year. If it is not relating time horizon, it is will be meaningless. Planning merely for a given amount will not constitute budgets unless a time dimension is added. (Welsch, 1992: 85)

v) Comprehensiveness:

A budget is comprehensive. It includes all the activities as operation of an organization. It covers the organization as whole and not only some segment and these are integrated into an overall budget for the entire organization. The overall budget is reflected as master budget. (Garrison, 1985: 303)

vi) Coordination:

Budgets are prepared for the different components/segments/divisions/ facets/activities of an organization so as to take care of the situation and problems of each component. The budget for each of the components is

prepared in harmony with each another. This is called coordination. (Coopeland and Dascher, 1978: 35)

2.19 The Master Budget: Networks of Inter-Relationship:

The master budgets is networking consisting of many separate budgets that are interdependent. A master budget normally consists of three types of budget.

2.19.1 Operating Budget:

Operating budget relates to the physical activities/operations of a firm such as sales, production, purchasing, debtors collection and creditors payment schedule. In specific term an operating budget has the following term:

(A) Sales Budget:

A sales budget is a detailed schedule of expected sales for coming period. It is usually expressed in both amounts and units. Once the sales budget has been set, a decision can be made on the level of production that will be needed to support sales and the production budget can be set well. The sales budget is the starting point in preparing the master budget. The sales budget is constructed by multiplying the expected sales in units by the sales price. Generally sales budget is accompanied by computation of expected cash receipts for the forthcoming budget period. This computation is needed to assist in preparing the cash budget for year. Expected cash receipts are composed of collections on sales made to customer in prior periods plus collection on sales made in the current budget period. (Garrison, 1985: 35)

Sales budget is prepared from sales forecast. A sales forecast encompass potential sales for the entire industry as well as potential sales for the firm preparing the forecast. Factors that are considered in making a sales forecast 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. (Welsch, Hilton and Gordon. 1992: 173)

(B) After the sales budget has been prepared the production requirements for the forth coming budget period can be determined and organized in the from of a production budget sufficient goods will have to be available to meet sales need and proved for the desired ending inventory. A portion of these goods will already exist in the form of beginning inventory. The remainder will have to produce. Thus, Production Need can be determined by adding budgeted sales units to the desired ending inventory and deducting by adding budgeted sales units to the desired ending inventory and deducting the beginning inventory from the total. (Horngreen, Foster and Dater, 1999: 182)

(C) Purchase Budget:

In 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 its suppliers during the period. The merchandise purchase budget is in the same basic format as the production budget; expect that it show goods to be purchased rather than goods to be produced.

(D) After production needs have been computed a direct material budget should be prepared to show the material that 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 this raw material requirement will already exist in the from of a beginning raw material inventory. The remainder will have to be purchased from supplier.

(E) Direct Labor Budget:

The direct labor budget is also developed from the production budget. Direct labor requirement must be computer so that the company will know whether sufficient labor time is available to meet production needs. Just knowing in advance, the company can develop plan to adjust the labor force as the situation may require. Direct labor requirement can be computed multiplying product to be produced by each period by the number of direct labor-hours required to produce a single unit. Many different types of labor may be involved. If so, then computation should be by type of labor needed. The hours of direct labor time resulting from these computations can then be multiplied by the direct labor

(F) The Manufacturing Overhead Budget:

The manufacturing overhead budget provides a schedule of all costs of production other than direct material and direct labor. These costs should be broken down by cost behavior for budgeting purpose and a predetermined overhead rate developed. This rate will be used to apply manufacturing overhead to units of product throughout budget period.

(G) The sealing And Administrative Overhead

The sealing as administrative expense overhead budget contain a listing of anticipated expenses for the budget period that will be incurred in areas 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 expense items is very

large, separate budgets may be needed for the selling and administrative functions.

2.19.2 Financial Budgets:

Financial budgets are concerned with expected cash receipts/disbursement financial position and results of operations, the component of financial budgets are:

(A) The Budgeted Income Statement:

The budget income statement is one of the key schedules in the budget process. It is the document that tells how profitable operation is 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) The Cash Budget:

Cash budget is the detail showing cash disbursement and the balance cash. The cash budget is composed of four major sections;

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

The receipt section consists of the operating balance of cash added to whatever is expected in the way of cash receipts during the budget period. The major source of receipt will be from sales; the disbursement section consists of can payment that are planned for the budget period these payment will include raw material purchases, direct labor payments, manufacturing overhead cost, and so on. Other cash disbursements are income tax, capital equipment purchases, dividend payment and so on.

The cash excess or deficiency section consists of the different between the cash receipts section total s and the cash disbursement section totals. If a deficiency exists the company will need to arrange for browed funds from its bank. If and excess exists, funds borrowed in previous period can be repaid or the idle funds can be placed in short-term investment.

The financing section provides a detailed account of the browning and repayments projected to take place during the budget period. It also includes a detail of interest payment that will due on money borrowed.

The cash budget should be broken down into time periods that are as shorts as feasible format cash budget is given below; (Garrison 1995: 312)

(C) Budgeting Balance Sheet:

Beginning with the current balance sheet and adjusting it for the data contained in the other budgets develops the Budgeted Balance sheet. (Garrison, 1985: 315)

2.20 The 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 nice presidents in charge of various functions such as sales, production and purchasing and the controller. 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. (Welsch and Gorden, 1992: 91)

2.21 Zero Based Budgeting:

Zero based budgeting is the method of budgeting in which mangers are required to start at zero budget levels every year and to justify all cost as if the

programs involved were being initiated for the first time. No costs are viewed as being on going in nature; the manger must start at the ground level each year and present justification for all costs in the proposed budget regard less of the type of cost involved.

Zero based budgeting differs from traditional budgeting in which budgets are generally initiated on an incremental basis; the managers start with last year's budget and simply adds to it according to anticipated needs. The manager doesn't have to start at the ground each year and justify on going costs for existing programs.

Zero based budgeting through is not really new concept, only the review of the departmental costs. Managers are in ad-vocation since long time in depth review of departmental cost. This review should be done annually, zero based budgeting lays down where as critics of zero based done every five years or so. The only difference is the frequency of review of departmental cost. (Garrison, 1985: 317)

2.22 Activity Based Budgeting:

Activity based costing can lead to improved decision making. Activity based costing principals extend budgeting. Activity based budgeting focuses on the lost of activities to produce and sell products and services. It separates indirect costs into separate homogeneous activity cost pools. Management uses the cause and effect criterion to identify to cost drivers for each of these indirect cost pools.

Four key steps in activity based budgeting are:

- Determine the budgeted costs of performing each unit of activity at each activity area.
- Determine the demand for each individual activity based on budgeted, production, new product development and so on.

- Compute the cost of performing each activity.
- Describe the budget as cost of performing various activities.

And activity based budgeting is facilitated by activity based costing. The benefits can be enjoyed from activity based budgeting are ranked as such:

- Ability to set a more realistic budget.
- Better identification of resource needs.
- Linking of cost output.
- Clearer linking of costs with staff responsibilities.
- Identification of budgetary slack. (Horngreen, Foster and Datar 1999: 190)

2.23 Standard Costing:

Standards are performance expectations. (Copeland and Dascher, 1978: 382)

Standards may be defined as measured quantities, which should be attained in connection with some particular operation or activity. Stated in terms of a test of efficiency, a standard is a test of efficiency; a standard is a precise measure of what should occur if the performance is efficient. (Khan and Jain, 1993: 631)

Historical costing is not an effective method of exercising cost control because it does not provide yardstick with which actual performance may be compared. Historical costing is not preceded by planned costs which are a must for based on a technical estimates for material, labour and overhead for a selected period of time and for a prescribed set of working conditions. It is determined in advance of production of what should be the cost. When standard costs are used for the purposes of cost control, the technique is known as "Standard costing". Therefore standard costing is preparation of standard costs and applying them to measured the variations from standard costs and analyzing the causes of variations with a view to maintain maximum efficiency in production. The system of standard costing can be useful in all types of

industries but it is more commonly used in industries producing standardized products, which are repetitive nature. (Jain and Narang, 1992: 5.230-5.231)

2.24 Control through Standard Cost:

In attempting to control costs, Managers have two types of decisions to make decisions relating to prices paid and decisions 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 firm. 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. Breakdowns in control over either price or quantity will lead to excessive costs 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, 1995: 353)

2.25 Setting Standard Cost:

The setting of standard costs is more an art than a science. It requires the combined thinking and expertise of all persons who have responsibility over prices and quantities of inputs. In a manufacturing setting, this would include the managerial accountant, the purchasing agent, the industrial engineer, and production supervisors and line managers.

The beginning point in setting standard cost is a rigorous look at past experience. The managerial accountant can be of great help in this task by preparing data on the cost features a prior year's activities at various levels of operations. 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. (Garrison, 1985: 354)

2.26 Most Widely Used Standard:

Standard fall into one of two categories: either ideal or practical

2.26.1. Ideal (Perfection) Standard:

Ideal or perfection standard is the expression of the absolute minimum costs possible under the best, conceivable conditions using specifications and equipment. No provision in made for wastage, spoilage, machine breakdowns and the like. This approach maintains that the resulting unfavorable variables will constantly remind managers of the perpetual need for improvement in all phases of operations. These standards might have an adverse effect on employee's motivation and they tend to ignore unreasonable goals. (Jain and Narang, 1992:5.234)

2.26.2 Practical (Currently Attainable) Standards:

Currently attainable standards are costs that can be achieved by a specified level of effort. Allowances are made for normal spoilage, waste and non-productive time. The level of effort specified for the standards various from company to company. There are two interpretations of practical standard. The first interpretation has standard set just tightly enough so that employee's regard their fulfillment as highly probable if normal effort and diligence are exercised.

The second interpretation of the practical standard is that standards are set tightly. That is employees regard their fulfillment as possible though unlikely. Standard can be achieved only by very effort operation. (Horngreen, 1991:217)

2.27 Analysis of Variance:

Control is 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. (Fremgen, 1976:250)

The derivation of the actual cost or profit or sales from the standard cost or profit or sales is known as variance.

When the actual cost is less than standard cost or actual profit is better than standard profit, it is known as favorable variances and such a variance is usually a sign of efficiency of the organization. On the other hand when actual cost is more than standard profit is called unfavorable variances and is usually an indicator of inefficiency of the organization. The favorable and unfavorable variances are also known as credit and debit variances.

Variances of different items of cost provide the key to cost control because they disclose whether and to what extent standards set have been achieved.

Variances can be classified into controllable variance and uncontrollable variances. If a variances due to inefficiency of cost center, it is said to be controllable variances. Such as: variances can be corrected by taking a suitable action. On the other hand uncontrollable variance does not relate on an individual or department but arises due to external reason like increase in prices of materials. (Jain and Narang, 1992: 5.239)

2.28 Decision Making:

Decision-making is one of the most crucial task of management, Manager is constantly faced with problems of deciding what products to sell, what production methods to use, whether to make or buy component parts, what prices to charge, what channels of distribution is to use, where to accept special orders at special prices and so forth. In decision-making, cost is always a key factor. The cost of one alternative must be compared against the cost of other alternatives as one step in the decision-making process. To be successful in decision making, managers must have tools at their disposal to assist them in distinguishing between relevant and irrelevant cost so that latter can be eliminated from the decision frameworks. (Garrrison, 1985: 539)

As management is the practice of consciously and continuously shaping formal organization, the art of decision making central to doing that. Decision making is the process of identifying and selecting course of action to some a specific problem. (Stoner, Freeman and Gilbert, 2000: 239)

As cost is the key factor for decision, the cost general can be classified as relevant and irrelevant from decision perspective. All the costs which are avoidable or which change with the change in alternatives are relevant and vice-versa. The following cost such as:

- Variable cost which changes
- Opportunity cost
- Avoidable cost
- Differential cost are

The relevant cost where as,

- Sunk cost
- Committed cost are

Irrelevant form decision-making perspective, (khan and Jain, 1993 : 830)

2.28.1 Decision Situation:

Various sorts of decision situation, which managers have to make, are:

(A) Sales Volume Related Decisions:

Such decisions cover:

i) Special Order:

One decision situation relates to increase in sales to increase in sales volume outside the normal marketing pattern. Typical examples of such type of sales are acceptance of special orders, one-time quantity sale and sales to foreign

customers. If such special sales don't affect the normal sales, the accept-reject decision would be based on the incremental continuation.

In case, the special sale would affect the future sales volume and/or selling price, the opportunity cost in terms of lost revenue will also be relevant to decision making. (Khan and Jain, 1993: 831)

ii) Disposing of Inventories:

Pricing decisions must consider the relative marketability of inventories. Due to damage or lack of demand, inventory mayn't 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 acquiring inventor are slunk costs and therefore irrelevant to the decisions. (Khan and Jain, 1993: 389)

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. (Chat field, Neilson and Denis, 1983: 389)

(B) Sell Now or Further Process Decisions:

Short-term incremental analysis also applies to sell or process further decision situations. When an item of production passes through various processes, it is saleable at different stages/point. In deciding at what stage to sell the product the two critical variables are; (a) identification of sunk cost and (b) calculations 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 that product further and if they could be

diverted to some other use; opportunity cost would also become relevant to the decision analysis. (Garrison, 1985: 557)

(C) Make or Buy Decisions:

Many firms have to choose between manufacturing certain components themselves or acquiring them from outside suppliers. Incremental analysis provides solution to this kind of decision problems. The relevant information is the committed/avoidable costs if the firm has adequate idle capacity to make the component. This is so because the firm wouldn't be required to incur fixed costs to produce 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 costs in terms of lost contribution will be relevant to the decision analysis. (Horngreen, 1991: 136)

(D) Addition/Elimination of Product Lines/Divisions/Shifts/Departments:

When the firm is divided into multiple sales outlet, products lines, divisions, departments, it may have to evaluate their individual performances to decide whether or not to continue operations of each of these segments or add a new segment. The decision criterion would be the segment margin. The segment margin equals segments contribution margin less fixed costs that are directly traceable to that segment. (Garrision, 1985:495)

(E) 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 a way that takes resources 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. (Horngreen, 1991:136)

(F) Joint Outputs of Common Processing Operations:

A decision faced by the management is whether to sell joint outputs at the spilt-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 costs before the split-off point are sunk cost that have already been incurred to create the joints products they are irrelevant and will not be considered in the decision making. 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 proportion of the output form the common processing cost can be varied. (Horngreen, 1991:141)

(G) Operate or Shut Down:

The decision criterion in operate or shut down situation will be based on the comparisons of the shut-down losses and the losses associated with continuing operations. (Khan and Jain, 1993: 846)

2.29 Pricing of the Product and Services

Many firms who produces substitute production like the competitors doing have no pricing problem at all. For their product, market prices already exist. They can't charge more than the market price. No need of calculated of pricing for the product as they simply charge the price that the market direct it to accept but there are the firms, facing the problem of pricing decisions.

Pricing decisions are decisions 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 a firm's activities and as such of affects the entire enterprise. As the prices charged on products largely determine the quantities customers are willing to purchase, the setting of prices dictates the 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 seals 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 model 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 accountant has different perspective regarding pricing decisions. They consider cost as the key factor to pricing decisions of the standard product. (Horgreen, Foster and Datar, 1999: 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 decisions relate to special orders of standard or near standard products and still others relate to 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 Cost (Absorption Cost) Pricing. (Garrison, 1985 : 505-507)

2.29.1 Cost Plus Pricing:

In pricing standard product, it should be recognized that selling prices should be sufficient enough to cover every type of cost in the long run. (Garrison, 1985: 504)

Some of the common approaches to the pricing of standard product is to employ some type of cost plus pricing formula. (Gordon, Cooper, Flak and Miler, 1981: 23)

The approach in cost plus pricing is to compute cost and then to add predetermined make-up to arrive at a target-selling price. There are two approach of computing cost in cost plus pricing.

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 make up percentage enough to cover fixed manufacturing overhead, selling and administrative overhead target selling price. (Horngreen, Foster and Dater, 1999: 133-436)

(A) Determining the Make-up Percentage:

One of the crucial elements in cost-plus pricing is "Mark-up-Percentage". This Mark-up should be enough to recover the buried cost and desired profit. To determine the desired mark-up percentage, manager can use the return on investment (ROI) approach as a base. Under absorption approach of cost-plus-pricing, the Mark-up percentage is computed as such; (Garrison, 1985: 506-509)

2.29.2 Target Cost Pricing:

A target pricing is the estimated price for a product or service that potential customers will be willing to pay. This estimate is based on an underwriting of customer's perceived value for a product and competitors 'response. A Target operating income per unit is the operating income that a company wants to earn on each unit of a product sold. The 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 derives target cost per unit.

Developing target prices and target cost requires the following:

- Develop a product that satisfies the needs of potential customer

- Choose a "Target Price" based on customer's perceived value for the product and prices completions charge and a target operating
- Income per unit.
- Drive a target cost per unit by subtracting the target operating
- Income per unit from the target price.
- Perform value engineering to achieve target cost. (Horngreen, Foster and Datar, 1999: 430)

2.29.3 Variable Cost Pricing:

Under variable cost pricing method, pricing of the product is determined by adding mark up to the variable expenses, the conditions under which a price based on 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.

2.29.4 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 mask up and thus arrive at selling price. (Garrison, 1985: 516-517)

2.29.5 Transfer Pricing:

Transfer pricing is the principal tools of financial control in decentralized organization. (Kaplan and Atkinson, 1984: 442)

A transfer price is the price on subunit of an organization charges for a product or services supplied to another subunit of the same organization. The transfer price creates revenue for the selling subunit and a purchase cost for the buying subunit, affecting operating income numbers for both subunits. The operating

income can be used to value the performance of each subunit and to motivate managers. (Horngreen, Foster and Datar, 1999: 904)

Methods of Transfer Pricing:

Methods of determining transfer pricing are:

1. **Market Based Transfer Prices:**

Sub-unit of an organization may choose to use the price of the similar product or service publicly listed in say, a trade journal. Also, subunits may select, for the internal price the external price that a subunit charges to outside customers.

Cost-Based Transfer Prices:

Sub-unit may choose a transfer price based on the costs of producing the product in question. Examples include variable manufacturing costs, manufacturing (Absorption) costs and full product costs. Full product costs include all production dcosts, 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 budget costs.

2. **Negotiated Transfer Prices:**

In some cases, sub-units of a company are free to negotiate the transfer price between them and then to decide whether to buy and sell internally or deal with outside parties. Subunits may use information about costs and market prices in these negotiations but there is no requirement that the chosen transfer price bear any specific relationships to either cost or market-price data. Negotiated transfer prices are often employed when market prices are volatile and change occurs constantly. The negotiated transfer price is the outcome of a bargaining process between the selling and the buying divisions. (Horngreen, Foster and Datar, 1999:905)

2.30 Financial-Statement-Analysis:

The balance sheet and income statements are the traditional basic financial statements of a business enterprise. They however do furnish useful information regarding the financial operation of a firm. The financial statement provides a summarized view of the financial position and operation of the firm. Thus to teach much about a firm a careful examination of a financial statement and performance report should be made. the analysis of financial statement is an important aid to financial analysis.

Financial analysis focus on key figure in the financial statements and the significant relationship that exist between them financial statement analysis is a process of evaluating relationships between components parts of financial statements to obtain a better understanding of the firm's position and performance. In brief it is the process of selection, relation and evaluation.

2.31 Techniques of Financial Statement Analysis:

Basically the following techniques are used in financial statement analysis:

(A) Ratio Analysis:

Ratios are the tools for measuring liquidity, solvency, profitability and management efficiency of a firm and it is also equally useful to the internal management, prospective investors, creditors and outsiders etc. The role of accounting ratio is very significant to increase the efficiency of the management. As such it is very important tool of management accounting also. (Paul: 1994 5.6)

Ratio is simply one number expression of relationship spelt out by dividing one figure into the other. Ratio analysis of business enterprises centers measures or guides concerning the expected capacity of the firm to meet its future financial obligations or expectations. Present and past data are used for the purpose and

what extrapolations appear necessary they are made to provide an indication of future performance. (Goyal and Man Mohan, 1997: 416-417)

Ratio analysis a widely used tool of financial analysis is fined 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. The relationship can be expressed as; (i) percentages (ii) Fractions (iii) Proportions of number. Alternative methods of expressing items, which are related to each other, are for the purpose of financial analysis referred to as ratio analysis. Ratio reveals the relationship in a meaningful way so as to enable to draw conclusions from them. A rationale of ratio analysis lies in the fact that it makes related information comparable. Single figure by itself has no meaning but when expressed in terms of a related figure, it yield significance instances. (M.K. Khan and Jain, 1996: 60)

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

i) Liquidity Ratio:

Liquidity is the pre-requisite for the very survival of a firm. The importance of adequate liquidity in the sense of the ability of a firm is to meet current or short-term obligations; when they become due for payment. The short-term creditors of a firm solvency or liquidity of a firm. The liquidity ratio measures 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, 1996: 66)

ii) Capital Structure/Leverage Ratio:

The capital structure/leverage ratio may be defined as financial ratios, which throw light on the long-term solvency of a firm reflected in its ability to assure the long-term creditors with regard to (a) Periodic payment of investors during

the period of the loan and (b) Payment of principal on maturity or in pre-determined installments at due dates. There are two aspects of the long term solvency of the firm.

- Ability to repay the principal when due.
- Regular payment of the interest. (Khan and Jain, 1996: 98)

iii) Profitability Ratio:

A company should earn profit to service and grow over a long period of time. Profits are essential, but it would be wrong to assume that every action initiated by management of a company should be aimed at maximizing profits irrespective of social consequences. It is unfortunate that the word profit is looked upon as a term of abuse since some firms always wants to maximize profit at the cost of employees, costumers and society. Except such infrequent cases, it is a fact that sufficient profits must be earned to sustain the operations of the business to be able to obtain funds from investors for expansion and growth to contribute towards the social overheads the social overheads for the welfare of the society. (Drucker, 1968: 99-100)

Profit is the difference between revenues 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 profits. Therefore, the financial manager show continuously evaluate the efficiency of its company. Generally two major types of profitability ratios are calculated; (Pandey, 1997: 124-125)

iv) Activity Ratio:

Funds of creditors and owners are invested in various assets to generate sales and profits. The better the management of assets better is the ledger the amount of sales. Activity ratios are employed to evaluate the efficiency with which the firm manages and utilized its assets. These ratios are also called turnover ratios because they indicate the speed with which assets are being converted or turned over into sales. Activity ratios, thus involve a relationship between sales and

assets. A proper balance between sales and assets generally reflects that assets are managed well several activity ratios can be calculated to judge the effectiveness of assets utilization. (Pandey, 1997: 119-123)

(B) Cash Flow Analysis:

All business activities are carried on with cash and all profitable activities must result in a net inflow of cash. It is therefore useful to establish the quantum of the flow of cash into business as a result of operations and other transactions. It should be remembered that cash inflow and profit are often different. It is possible that in a business suffering a loss, there may be still an increase in cash because of trading operations. (Gupta, 1997: 30.2)

In dynamic business, assets and liabilities are continuously changing and profits earned are being used for various purposes, chiefly paying a dividend. Therefore amount of cash in hand (including that at bank) would change because of:

- Net cash inflow due to operations
- Change in assets and liabilities
- Payment of dividend etc.

It would be necessary to remember that:

- If there is an increase in assets cash must have been paid out or utilized
- A reduction in assets should mean that part of the assets was realized in cash.
- An increase in liability will also mean that to that extent cash must how come in; and
- A reduction in liability means that to that extent cash has been utilized. (Gupta, 1997: 30.3)

Cash-flow analysis is done through preparing cash budget. Cash as an important current asset 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

Available of needed cash in the firm timely 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 include two parts.

- Cash Inflows
- Cash Outflows

Cash inflow arise from transactions such as cash sales, collections of account 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 in flows and outflows ignores the non-cash items such as depreciation, amortization etc.

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

- The need for financing cash defect.
- The need for investment planning to put excess cash to profitable use. (Welsch, Hilton and Gordon, 1991:433)

2.32 Capital Budgeting

Capital budgeting is the process of making those long-term planning decision for investments. It is decision making and control tool that focuses primarily on projects or programmers whose effects span multiple time periods. (Horngreen, Foster, and Datar, 1999:779)

Capital budgeting is the process of planning and controlling the strategic (long-term) and tactical (Short-term) expenditure for expansion and contraction of investment in operating (fixed) assets. (Welsch, Hilton and Gordon, 1992: 394)

Capital budgeting is the planning to expenditure whose return stretch themselves beyond a one-year time interval. It is the process of deciding whether or not to commit resources to a project whose benefits would spread over several time periods. It considers proposed capital outlays and their financing. The main exercise involved in capital budgeting is to relate the benefits to costs in some reasonable manner which would be consistent with the project maximizing objectives of the business capital budgeting decision is the most important areas of managerial decisions as they involve more extended estimation and prediction of things to come requiring a high order of intellectual ability of their economic analysis. Heavy spending on capital assets since the Second World War has stimulated a genuine and lively interest on the part of economist's financial analysis, and accountants in managerial approaches to capital budgeting decisions. (Goyal and Man Mohan, 1997: 100-107)

Capital expenditures are investments because they require the commitment of research today to receive higher economic benefit (.e. profit) in future. Capital expenditures become expenses in the future as their related goods and services are being used to rash higher future profits from future revenues to achieve future cost savings the related future expenses such as depreciation expenses

are identified with the future periods when the capital addition are used for their intended purposes. Therefore capital expenditure involve two palling and controlling phases a) investment b) expenses. Major issue is planning capital expenditure is the problem of ensuring that company has the capacity to produce acquire for be able to deliver the goods and services that will be needed to met its sales and services plan. A major issue in controlling the actual expenditure of funds is the problem of ensuring. That the actual expenditure are consistent with the plans and that founds an available when the expenditure are ioncurred. (Welsch, Hilton and Gorder, 1992: 394)

Conceptually capital budgeting has three aspects. It ranks various proposals by measuring their profitability before considering the cost of capital in descending order, uses the company's minimum desired rate of return (average cost of capital) as the cut off point for determining whether projects should be accepted or rejected. In doing so, the limitation imposed by top management decision on the total volume of investment to be made has also to be taken into account. Though these three aspects are inter wined it is extremely difficult to weave them together in one harmonious whole so, that the way may be passed for optimum investment decision. (Goyal and Man Mohan, 1997: 101)

2.33 Methods of Capital Budgeting: Measuring the Economic Value of Capital Expenditure

More proposes for projects are at the threshold of the business firm comparing to its ability and willingness to finance some proposals are good, others are different and yet others poor. A screening process has to be devised for findings out the real content of such proposals. Methods of differentiating them should be developed. (Goyal and Man Mohan, 1997: 108)

For this purpose numerous method of measuring the economic value of an investment can be found. The methods of appraising capital expenditure proposals can be classified into two broad categories.

- Unsophisticated or traditional method
- Sophisticated or time adjusted method

The latter are more popularly known as discounted cash flow techniques as they take the time factor into account.

The first category includes:

- Pay back period method (PBP)
- Average rate of return (ARR)

The second category includes:

- Net present value method (NPV)
- Internal rate of return (IRR)
- Profitability index (Khan and Jain 1996:190)

2.33.1 Pay Back Period Method

The pay back period method is the traditional method of capital budgeting. It is the simplest and perhaps the most widely employed quantitative method for appraising capital expenditure decision. This method answers the questions; how many years will it take for the cash benefit to pay the original cost of investment, normally disregarding salvage value. Cash benefit here represents CFAT, ignoring interest payment. Thus PBP measures the numbers of years requires for CFAT to pay back the original outlay required in an investment proposal.

There are two ways of calculating PBP. The first method can be applied when the cash flow stream is in the nature of annuity for each year of the projects life i.e. CFAT are uniform. In such a situation the initial cost of the investment is divided by the constant annual cash flow.

$$\text{PBP} = \frac{Investment}{Cons\tan t\ Annual\ Cash\ fow}$$

The second method is used when projects cash flow are not equal but vary from year to year. In such a situation, PBP is calculated by the process of cumulating cash flow till the time when cumulative cash flows become equal to the original investment.

Accept-Reject Criterion:

The pay back period can be used as a decision criterion to accept or reject investment proposals. One application of this technique is to compare the annual payback with a pre-determined pay back i.e. the pay back set up by the management in terms of the maximum period during which initial investment must be recovered. If the actual pay back period is less than the pre determined pay back, project would be rejected. Alternatively the pay back can be used as a ranking method. When mutually exclusive projects are under consideration, they may be ranked according to the length of the pay back period.

Thus, the Project having the shortest payback may be assigned rank one, followed in that order so that the project with the longest payback would be ranked last. The term mutually exclusive refers to proposal out of which only one can be accepted to the exclusion of others. Obviously, projects with shorter payback period will be selected. (Khan and Jain, 1996: 192)

2.33.2. Average Rate of Return (ARR):

The average rate of return (ARR) method of evaluating proposed capital expenditure is also known as the accounting rate of return method. It is based upon accounting information rather than cash flow. There is no unanimity regarding the definition of the rate of return. There are a number of alternative methods for calculating the ARR. The must common usage of the average rate of return (ARR) expresses it as follows:

$$\text{ARR} = \frac{\text{Average Annual Profit after Tax}}{\text{Average Investment over the Life of the Project}} \times 100$$

The average profit after tax is determined by adding up the after tax profits expected for each year of the projects life and dividing the result by the number of years. In case of annuity the average after tax profits are equal to any years profit. (Khan and Jain, 1996: 199)

Accept Reject Rule:

With the help of the ARR, the financial decision maker can decide whether to accept or reject the investment proposal. According to the ARR, as an accept reject criterion the actual ARR would be compared with pre-determined or a minimum required rate of return or cut off rate. A project would qualify to be accepted if the actual ARR is higher than the minimum desired ARR. Otherwise, it is liable to be rejected. Alternatively, the raking method can be used to select or reject proposals. Thus, the alternative proposals under consideration may be arranged in the descending order of magnitude, starting with the proposals with the highest ARR and ending with the proposal having the lowest ARR. Obviously, Projects having the higher ARR would be preferred to projects, which have lower ARR. (Khan and Jain, 1996: 191)

2.33.3 Net Present Value Method (NPV):

The net present value (NPV) method is a discounted cash flow approach to capital budgeting that discounts all expected future cash flows to the present using a minimal desired rate of return. To apply the net present value (NPV) method to a proposed investment proposal a manager first determines some minimum desired rate of return. The minimum rate is called the required rate of return, hurdle rate, discount rate or cost of capital. Then, all expected cash flows from the project are discounted to the present, using this minimum desired rate. If the sum of the present values of the cash flow is zero, or positive, the project is desirable and if negative it is undesirable. When choosing among several investments, the one with the largest net present value is the most desirable. (Horngreen, 1991: 392)

This method requires determination of three items for a project:

1. Initial cash outflow
2. Future net cash inflow and
3. Target rate of return.

If the computed amount difference between the initial net cash investment (the present value cash paid for the investment) and the computed present value of the net cash inflows from the investment is favorable (i.e. positive) to the net inflows, the project will earn more than the target rate of return. if the difference is not favorable to the cash inflows the project will not earn the target rate of return. When ranking competing projects the one with the highest net present value is ranked first. (Welsch, Hilton and Groden, 1992-411)

Accept Reject criterion for NPV

The decision for a project under NPV is to accept the project if the NPV is positive and reject if it is negative. Zero NPV implies that the firm is in-different between accepting or rejecting the project. However in practice it that only the original investment has been recovered. As a decision criterion this method can also be used to make a choice between mutually exclusive projects. On the basis of the NPV method, the various proposals would be ranked in order of the net present values. The project with the highest NPV would be assigned the first rank, followed by others in the descending order.(Khan and Jain, 1996:201)

2.33. 4 Internal Rate of Return

The internal rate of return is defined as that discount rate which forces the present value of projects excepted cash in flows to equal the present value of the projects excepted costs.

PV Inflows = PV Investment cost transposing, we obtain

PV Inflows- PV Investment cost =0

Which can be written as,

$$\sum_{t=0}^{n} \frac{CF_1}{(1+IRR)^t} - Investment = 0$$

IRR technique is also known as yield on investment marginal efficiency of capital rate of return and so on like the present value method, their method also considers the time value of money by discounting the cash streams. The basis of the discount factor however is different in both cases. In the case of the present value method the discount rate, usually the cost of capital, it determinants are external to the proposal under consideration. The IRR on the other hand, is based on facts, which are internal to the proposals. In other words, while arriving at the required rate of return for finding out present values the cash flows-inflows as well as outflows are not considered. But the IRR depends entirely on the initial outlay and the cash proceeds of the projects which are being evaluated for acceptance or rejection. It is, therefore appropriately referred as internal rate of return.

The internal rate of return is usually the rate of return is usually the rate of return that a project earns. It is defined as the discount rate, which equates the aggregate present value of the net cash inflows (CFAT) with the aggregate present values of cash out flows of a project. In other words, it is that rate which gives the project NPV zero. (Khan and Jain, 1996:204)

Accept-Reject Criterion

The use of the IRR, as a criterion to accept the capital investment decisions involves a comparison of the actual IRR with the required rate of return also known as the cut of rate or hurdle rate. The project would qualify to be accepted if the IRR (r) exceeds the cut-off rate (k). If the IRR and required rate of return are equal the firm is indifferent as to whether to accept or reject the project. (Khan and Jain 1996:204)

2.33. 5. Profitability index or Benefit cost Ratio

Yet another time adjusted capital budgeting technique is the profitability index (PI) or benefit cost ratio. It is similar to the NPV approach. PI approach measures the present value of return per rupee invested, while the NPV is based on the difference between the present value of future cash inflows and the present value of cash outlays. Profitability Index may be defined as a ratio which is obtained dividing the present value of future cash inflows by the present value of cash outlays.

Mathematically,

$$PI = \frac{Present\ Value\ of\ Cash\ Inflow}{Present\ Value\ of\ Cash\ Outflow}$$

This method is also known as the B/C Ratio because the numerator measures benefits and the denominator costs.

Accept Reject Rule

Using the profitability Index, a project will qualify for acceptance if its profitability index exceeds one. When profitability index equals to one (1), the firm is indifferent to projects. When profitability index is greater, equal to, or less than one, the net present value is greater, equal or less than zero respectively. In other word, NPV will be positive when profitability index is grater than one; will be negative when the profitability index less than one. Thus the NPV and profitability index approaches give the same results regarding the investments proposals.

The selection of the projects with the profitability index method can be done on the basis of ranking too. The highest rank will be given to the project with the highest rank will be given to the project with the highest profitability index followed by others in the same order. (Khan and Jain: 213)

2.34 Investment Analysis

i) Cash Flow Estimation in investment Analysis

Cash flow generally indicates the cash outflow and cash inflow. The key point in investment analysis is to focus exclusively on differences in expected future cash flows that result from implementing a project. All cash flows are treated the same whether they arise from operations, purchase or sale of equipment or investment in or recovery of working capital. The opportunity cost and the time value of money are tied to the cash flowing in or out of the organization not to the source of the cash. (Khan and Jain, 1993:175)

One of the biggest challenges is determining those cash inflow relevant to decision making. Relevant cash flows are expected future cash flows that different among alternatives. Capital investments projects are typically have five major categories of cash flows.

- Initial investment in machine and working capital.
- Cash flow from current disposal of the old machine.
- Recurring operating cash flows.
- Cash flow from terminal disposal of machine and recovery of working capital.
- Income tax impacts on cash on cash flow.(Dangol and Prajapati, 2001:837)

2.35 Risk and Uncertainty in capital Budgeting

The analysis of risk and uncertainty is an important element in the capital budgeting decision. The term risk refer to the variability of the actual returns from the excepted returns in terms of cash flow.(Khan and Jain, 1993:298)

The capital budgeting decision in based on the benefits derived from the project. These benefits are measured in terms of cash flow. The estimation of future returns is done on the basis of various assumptions. The actual return in term of cash inflow depends on Varity of factors such as price, sales volume,

and effectiveness of the advertising campaign, competition, cost of raw materials, manufacturing cost and so... on, each of these in turn depends on other variable like the state of the economy the rate of return inflation etc. The accuracy of the estimate of the future returns and therefore the reliability of the investment decision would largely depend upon the precision with which these factors are forecast. What so ever techniques are followed for forecasting precisely actual can never tally to estimation? As the results actual results vary from the estimation. This variation technically referred to risk. The term risk with investment term can therefore be defined as the variability in the actual returns emanating from a project in future over its working life in relation to the estimated return as forecast at the time of initial capital budgeting decision. (Horn green, Foster and Datar, 1999:838)

The decision situation with reference to risk analysis in capital budgeting decisions can be broken up into their categories.

- Uncertainty
- Risk
- Certainty

The risk situation is one in which the probabilities of a particular event occurring are known. These probabilities of a particular event occurring are known. These probabilities are not known under the uncertainty situation. The different between risk and uncertainty therefore lies in the fact that the variability is less in risk and uncertainty. (Luce and Raiffa, 1957:13)

In brief, risk with reference to capital budgeting results from the variation between the estimated and the two the more risky the project. (Khan and Jain, 1993: 276)

i) Measurement of Risk in Capital Budgeting

Risk can be quantified from the following measurement

(A) Sensitivity Analysis

Once measure, which expresses risk in more prices terms, is sensitivity analysis. It provides information as to how sensitive the estimated project parameters, namely the excepted 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 three will always be estimation errors. Sensitivity analysis takes care of estimation errors by using a number of possible outcomes in evaluating a project. The method adopted under the sensitivity analysis is to evaluating a project using a number of estimated cash flows to provide to the decision maker an insight into the variability of the outcomes. The sensitivity analysis provides different cash flow estimates under three assumptions:

- The worst (i.e. The most likely)
- The expected (i.e. The most likely)
- The best (i.e. the most optimistic)(Horngreen, Foster and Datar, 1999: 839)

(B) Precise measure of risk: Standard deviation and coefficient of variation

Assigning probabilities to cash flow estimates as a measure of variability of future returns represent a further improvement over sensitivity analysis, which was itself superior to the method which involved the estimation of future cash flow in the form of single figure. The assignment of probabilities and the calculation of expected values take into account the risk in terms of variability in explicit terms in decision making. For incorporation of risk into the capital budgeting analysis, a more precise statistical measure is called for such tools are (a) standard deviation (6) and (b) the coefficient of variation (v). Standard deviation is an absolute measure which can be applied when the projects involve the same outlay. If the projects to be compared involve different outlays, the coefficient of variation is the correct choice, being a relative measure. (Khan and Jain, 1993: 279)

(C) Standard deviation: Absolute Measure of Risk

Standard deviation is the square root of the mean of the squared deviation, where deviation is the difference between an outcome and the expected mean value of standard deviation, weight to the square of each deviation by its probability occurrence should be given.

The greater the standard deviation of probability of distribution the greater is the dispersion of outcomes around the expected value. Standard deviation is a measure that indicates degree of uncertainty of cash flow and is one measure of risk.

If the two projects have the same expected value (mean) then one which has the greater 6 will be said to have the higher degree of uncertainty or risk.(Khan and Jain, 1993:280)

(D) Coefficient of variation: A Relative Measure of Risk

The standard deviation can be misleading in comparing the uncertainty of alternatives projects, if they differ in size. The coefficient of variation (v) is a correct technique in such cases. It is calculated as follows;

v = Standard Deviation (6

Expected cash flow (CF)

The higher coefficient of variation, the more risky the project is;

2.36 Risk Evaluation Approach

Once nature of risk is understood, and its quantum estimated, it is to be incorporated within the decision-making framework, the techniques to handle risks are:

i Risk- Adjusted Discounted Rate Approach

The risk adjusted discount rate (RAD) approach is one of the simplest and most widely used methods for incorporating risk into capital budgeting decision. Under this method, the risk inherent in a project is incorporated in the discount rate employed in the present value calculations. The relatively risky projects would have low discount rate. (Khan and Jain, 1993; 282 283)

Accept Reject Decision

The risk- Adjusted discount rate approach can be used with both the NPV and IRR. If the NPV method is used to evaluate capital expenditure decisions the NPV would be calculated using the risk-Adjusted rate. If the NPV is positive, the proposal would qualify for acceptance. A negative NPV would signify that the project should be rejected. In case of the IRR, as a decision criterion the internal rate of return would be composed with the risk adjusted required rate of return. If the required rate of return exceeds the risk-adjusted rate, the proposal would be accepted otherwise not. (Khan and Jain, 1993:284)

ii Certainty Equivalent Approach

This certainty equivalent approach is an alternative to the risk-adjusted rate method to incorporate risk in evaluating investment projects, under the risk adjusted discount rate method, the risk of the project is taken into consideration by adjusting excepted cash flows and not the discount rate. These methods eliminated the problem arising out of the inclusion of risk premium in the discounting process. (Khan and Jain, 1993:285)

iii Probability Distribution Approach

This approach lays down that through probability can be distribution risk in evaluating capital budgeting proposal can be incorporated. The probability distribution of cash flows overtime provides valuable information about the expected value of return and the dispersion of the probability distribution of possible returns on the basis of this information an accept reject decision can be taken.

The application of probability distribution approach in analyzing risk in capital budgeting depends upon the behavior of the cash flows, from the point of view of behavior cash flows being.

- Independent
- Dependent

The assumption that the cash flows are independent overtime signifies that future cash flows aren't affected by the cash flows in the preceding or following years. (Van Horne, 1998:179-188)

iv Decision -Tree Approach

The decision -tree approach is another useful alternative for evaluating risking investment proposals. The outstanding feature of this method is that is takes into account the impact of all probabilistic estimates of potential out comes. Every possible outcome is weighed in probabilistic terms and then evaluated, the decision tree approach is epically useful for situation in which decision at one point in time also affect the decisions of the firm at stone later date. Another useful application of decision tree approach is for such projects which require decisions to be made in sequential parts.

A decision tree is pictorial representation in tree from which indicates the magnitude, probability and interrelationship of all possible outcomes. The format of the exercise of the investment decision has an appearance of a tree with branches and therefore this method is known to as the decision tree method. The decision-tree shows the sequential cash flow and the NPV of the proposed project under different circumstances. (Osteryoung, 1979:162)

2.37 Responsibility Accounting

One of the uses of management accounting is managerial control. Among the control techniques "Responsibility accounting has assumed considerable significance. While the other control device is applicable to the organization as

a whole, Responsibility accounting represents methods of measuring the performance of various decision of an organization. The term "Division" with reference to responsibility accounting is used in a general sense to include any logical segment/component / sub-component of and organization. Defined in this way, it includes a division, a department, a product-line, a service center, a product-line, a channel of distribution, a class of customer and so on. The test to identify that a division is that the operating performance is significance to management. (Fregmen, 1979:328)

Responsibility accounting collect and reports planned and actual accounting information about the inputs and outputs of responsibility center. (Anthony and welsch, 1977:403)

A responsibility accounting system measures the operating results of responsibility centers. Executives use responsibility accounting information to evaluate managers and there by motivate them to act in the organization's best interest. Responsibility accounting emphasizes a major lesson for both managers and accounts that is the behavior of managers is often heavily influenced by how their performance is measured.(Horn green, 1991:289)

Responsibility accounting is based on information relating to inputs and outputs. The resources used by an organization are essentially physical in nature, such as quantity of materials consumed, Hours of labor and so.......... on. Responsibility accounting always based on cost and revenues but also estimated future cost and revenue data. (Khan and Jain, 1993:771)

2.38 Responsibility Centers

Responsibility accounting focus on responsibility centers. A responsibility center is a sub unit of an organization under the control of a manager who is responsible for the activities of that responsibility centers. Individuals can possibly manage a small firm. How ever for effective control, a large firm is

divided into meaningful segments/departments. Each sub unit has certain activities. These sub units of an enterprise for the purpose of control are called responsibility centers / division. A responsibility center can be a big unit like production department and a small unit like cash section of the accounting department. The important criteria for creating a responsibility center is that the unit of the organization should be separable and identifiable for operating purposes and its performances measurement should be possible. (Khan and Jain, 1993:772)

For control purpose, responsibility center can take many forms including;

- Cost center - Control and reporting of cost only
- Profit center - Control and reporting revenues and expenses.
- Investment center - Control and reporting of revenues expenses and related investment. (Garrison, 1985:453)

2.39 Decentralization

One of the uses of managerial accounting is decision making. For it decentralization has come to the front. Decentralization is the delegation of the exists the greater decentralization. Decentralization is a matter of degree along a continuum. It has its own benefit and cost. The benefit of decentralization includes the following;

- The lower- level managers have the best information concerning local conditions and therefore are able to make better decisions than their superiors.

Manager acquire the ability to make decision and other management skills that assists their movement upward in the organization; and

- Manager enjoys higher status from being independent and thus is better motivated.

The cost decentralization includes the following;

- Managers may make decisions that are not in the organization best interest by;
    1. focusing on and acting to improve their over segments performance at the expense of the organization
    2. Not being aware of relevant facts from other segment
- Managers tend to duplicate services that might be less expansive.
- Cost of accounting and processing information frequently rises. (Horn green, 1991:353)

As different responsibility center are responsible activities, decentralization is a must for decision making in that responsibility center. Without authority of taken. Decentralization in the firm has been a must is that surprising due to the following reasons.

- Complex and uncertain environment demand for more resources and decision-making.
- Difficulties in information specializations.
- Timelines of Response
- Conversation of central management time.
- Computational complexity
- Motivation for a local managers (Kaplan and Atkinson, 1998:293)

Decentralization seems compelling. The outcome or pay off of any reasonably sized of any organization depends on many inter-related decisions. Different members in the organization have different bodies of knowledge and abilities to act. It is impossible to any individual or central group to posses all the relevant information, experience time and computational power to determine the detailed operating plans for the organization. This very fact has led to decentralization. (Garrision, 1985:444)

Decentralization is more popular in profit seeking organizations than in non profit organizations. Managers can be given freedom when their results are

measurable so that they can be held accountable for them. Poor decisions in profit seeking firm become apparent from the inadequate profit generated. Most non profit organizations lack such a reliable performance indicator so granting managerial freedom is more risky. (Horngreen, 1991: 353)

Philosophies of decentralization differ considerably. Cost-benefit consideration usually requires that some management decisions be highly decentralized and others centralized. for example; problem solving and attention directing functions should be highly decentralized while tax planning and payroll should be centralization.

Decentralization is most successful when an organization's segment are relatively independent of one another i.e. the decision of one manager will not affect the fortunes do much buying from the same outside suppliers or much selling to the same outside markets they are candidates of heavier centralization. (Kaplan and Atkinson, 1998:294-298)

Regarding control system design in decentralization, the criteria should be followed are;

- Cost-benefit test
- Goal-congruence
- Managerial effort
- Segment autonomy

The control system should be designed to respect segment autonomy to the extent specified by top management. In other word, when top manager openly commit them selves to heavy decentralization, they should rarely interfere in decisions, by segment managers. (Horn green, 1991:354)

2.40 Review of Profit Planning Practices in Nepalese Context (A Brief Review of Previous Research Work)

Researches in the area of management accounting practices in Nepalese context are not made. But many researches have been made in the area of profit planning and control in Nepalese context. As profit planning and control covers some of the aspects of management accounting, researches made on these areas are taken into consideration for the sake of review to examine how profit planning and control practices in Nepalese companies. Many of the researches have been made of manufacturing concerns and except a few most of them are not profound. An attempt is made here to review some of the researches, which have been submitted in profit planning and control in the context of Nepal.

Mr. Khagendra Prasad Ojha (1995) had conducted a research in the topic "Profit Planning in Manufacturing Public Enterprises: A Case Study of Royal Drugs Limited and Herbal Production and Processing Company Limited." This research of Mr. Ojha was mainly centered with the current practice of profit planning and its effectiveness in RDL and HPPCL:

The time period coursed by this research was six years from FY 046/047 to FY 051/052. The data and other necessary information's were collected by using secondary as well as primary sources of data. In his research Mr. Ojha has pointed out various findings and recommendations. Some remarkable findings were as follows:

- Inadequate planning's of profit due to lack of skilled planner.
- Inadequate authority and responsibility to planning department.
- Failure in achievements due to inadequate evaluation of internal and external variables.
- Failure due to inadequate forecasting system.
- Lack of entrepreneurship and commercial concepts in overall operations of the enterprises.

Mr. Ojha summarized his findings by stating plans are formulated on traditional ad-hoc basis due to lack of budgeting experts and semi-skilled planners. Some functional budgets are prepared but not in systematic way. They have not followed a system of periodical performance report.

Mr. Govinda Raj Joshi (1996) had conducted a research entitled "Budgeting: Profit Planning in Nepal Rosin and Turpentine Ltd. (NEROT)". Mr. Joshi had mainly focused on the practice and effectiveness of Budgeting in NEROT.

The time period covered by this research was five years from FY 049/050 to FY 053/054. The data and other necessary information's were collected by using secondary sources of data. In his research Mr. Joshi had pointed out various findings and recommendations. Some remarkable findings were as follow:

- There is not adequate planning of profit due to lack of skilled planers, executive management planning instruction and effective communication system in the company.
- There is not adequate authority and responsibility to planning department and fair as well as effective personal management.
- Existence of nation and favoritism, lack of environmental analysis and discouraging of participatory management approach are the root cause for improper practice of budgeting system.

Mr. Surya Prasad Poudel (1997) had conducted a research entitled "Profit Planning in Manufacturing Company: A Case Study of Himal Cement Company Limited". Mr. Poudel had mainly centered in his study on the application of profit planning concept in HCCL.

The time period covered by this research was six years from FY 043/044 to FY 048/049. The data and other necessary information were collected by using

secondary sources of data. In his research Mr. Poudel had pointed out various findings and recommendation. Some remarkable findings were as follows:

- Company had fluctuation trend in targeted production.
- In variable cost structure, sales commission has the dominant role.
- In fixed cost structure salary has occupied the dominant role.
- Actual sales of the company seems to be more than 50 percent of plan sales in most of years during the six years period.

Mr. Ram Raja Kandel (2001) had conducted a research in a topic "Profit Planning in Nepalese Public Enterprises: A Case Study of Royal Drugs Limited". Mr. Kandel had concerned his study in the application of comprehensive profit planning system.

The time period covered by this research was seven years from FY 051/052 to 057/058. The data and other necessary information's were collected by using both. In this research, Mr. Kandel had pointed out various findings and recommendations. Some remarkable findings were as follows:

- Actual performance is always below in every year than the target.
- The company doesn't have any clear-cut policy.
- Planning and decision making are completely centralized.
- Budgets are prepared just to fulfill formalities they are not used effectively for profit planning.

Mr. Keshab Subedi (1999) had conducted a research entitled "Profit Planning in Manufacturing Public Enterprises of Nepal".

The time period covered by the research was of five years from FY 048/049 to 052/53. The necessary data and other information's had been collected from secondary sources of data. In his research Mr. Subedi had pointed out various findings and recommendations. Some remarkable findings of the research were:

- There is more consistent between the target and actual activities.
- The enterprise doesn't have clear cut practice of managing cost and separating them into fixed and variable portion for their better management. Marginal costing break even analysis, flexible budgeting etc were not considered while setting the plan.
- There is red-tapism and delay in the implementation phase as shown by the achievements too below than the targets.
- There is no sense of cost management as the cost have not been diagnosed as controllable and non-controllable.

Mr. Binod Kumar Shah (2001) had conducted research in the topic "Profit Planning in Public Utility Enterprises: A Case Study of Nepal Telecommunication Corporation". Mr. Shah had mainly centered with the current practice of profit planning and its effectiveness in NTC.

The time period covered by this research was five years from FY 051/052 to FY 055/056. The data and necessary information's does collected by using secondary sources of data. In his research Mr. Shah has pointed out various findings and recommendations. Some remarkable findings were respectively:

- Budgets aren't prepared in detail and systematically.
- Costs aren't classified and analyzed systematically.
- Financial performance is not satisfactory.
- No controlling activates are carried on for the betterment of the organization.
- Actual activities are more variable than budgeted activities.

Miss Abha Subedi (2001) had conducted a research entitled "Profit Planning in Commercial Bank: A Case Study of Rastriya Banijya Bank". Miss Subedi had focused her study in the investment policy of Rastriya Banijya Bank with the current practice of profit planning and its effectiveness in Rastriya Banijya Bank.

The time period covered by this research was five years from FY 1993/94 to FY 1997/98. The data and other necessary information's were collected by using secondary sources of data. In this research Miss Subedi had pointed out various findings and recommendations. Some remarkable findings were respectively:

- Investment pattern of RBB is mainly towards the security of land, gold and silver.
- There is no proper manpower planning. This is causing problem of over staffing and extra cost burden.
- No systematic application of budgeting.
- Activities of the bank are centered to urban areas only.
- No. of branches have been increasing each year.

Mr. Makshindra Thapa (2001) has conducted a research entitled "Profit Planning in Media Printing Business: A Case Study of Gorkhapatra Sansthan". Mr. Thapa's major concern in his research was the examination of adaptation of profit planning and control programs in the corporation.

The time period covered by this research was five years from FY 052/053 to FY 056/057. The data and other necessary information's were collected using secondary sources of data. In his research Mr. Thapa had pointed out various finding. Some remarkable findings were as follows:

- GPS is not properly following every steps of budgeting.
- No proper planning technique is followed.
- Capital budgeting practices is not proper since it lacks project evaluation techniques such as PBP, IRR, NPV and PI.
- Failure due to inadequate forecasting system.

Mr. Madan Bahadur Badu (1999) had conducted a research entitled "Profit Planning in Dairy Development Corporation". Mr. Badu had centralized his study in current practice of profit planning in DDC.

Time period covered by the research is Five years from FY 049/050 to FY 053/054. The data and other necessary information were collected from secondary and primary sources of data. In his research Mr. Badu had pointed out various findings. Some remarkable findings were as follows:

- No Proper practice of segregation of cost into fixed and variable.
- No maintenance of periodic performance report systematically.
- Lower level participation in planning. Decision making is not encouraged.
- Plan is prepared on traditional ad-hoc basis.
- Inadequate authority and responsibility to planning department.
- No proper analysis of environmental variables.

Mr. Manish Raj Shakya (1999) had conducted a research entitled "Profit Planning in Lumbini Sugar Mill Limited". The research was centralized to examine the application of budget as tools of profit planning in Lumbini Sugar Mills Ltd.

Time period covered by the research was Seven years from FY 048/049 to FY 052/053. The necessary data and other information had been accumulated from primary as well as secondary sources of data. Mr. Shakya had pointed out various findings. Some remarkable findings were as follows:

- HMG/N intervenes in setting objectives, goals and strategies.
- No systematic plan is developed.
- HMG/N plays role in fixing price.
- Variable cost occupied a dominant role in total cost. It occupies 80.16%.
- Lack of planning expert in developing budget.
- No planning activities for cost reduction.

- Variable cost occupied a dominant role in total cost. It occupies 80.16%.
- Lack of planning expert in developing budget.
- No planning activities for cost reduction.

Miss Pramita Dangol (2001) had conducted a research entitled "Profit Planning in Manufacturing Public Enterprise: A Case Study in Hetauda Cement Industry

Ltd.”. Miss Dangol had focused her study in the application of profit planning concepts in PES.

The time period covered by the research is Five years from FY 051/052 to FY 055/056. Necessary data and other information were collected from both the secondary and primary sources of data. Miss Dangol had pointed out various findings. Some remarkable findings were as follows:

- No proper application of any effective sales forecasting technique.
- Planning of budgeting policy of the company is very poor and there is no system of taking corrective action for pre-planning.
- Decision making powers are centralized.
- There are no clear cut duties and responsibilities of the employee.

Mr. Gunakar Bhatta (1998) had conducted research on the topic “Profit Planning in Nepal Electricity Authority”. Mr. Bhatta had focused his study mainly on the application of comprehensive profit planning system in Nepal Electricity Authority.

The time period covered by the research is Five years from FY 049/050 to FY 052/053. The data and other necessary information were collected from both the secondary and primary sources of data. In the research, Mr. Bhatta had pointed out various findings. Some remarkable findings were as follows:

- The authority fails to maintain its periodic performance report systematically. Goals and objectives are limited only to the high ranking officials.
- There is lack of co-ordination and communication between the various responsible departments.
- Overheads aren’t systematically classified and it creates problem to analyze expenses properly.
- There is no proper classifications of cost.

Mr. Narayan Prasad Bhattarai (2000) had conducted a research on the topic "Profit Planning in Central Zoo". The main focus of his research was the application of profit planning and control and its effectiveness in central zoo.

The time period covered by the research was Five years from FY 051/052 to FY 055/056. Necessary data and other information were collected from both the secondary and primary sources of data. In his research, Mr. Bhattarai had pointed out various findings and recommendations. Some remarkable findings of the research were:

- Central Zoo has no system of preparing strategic long-term profit plan before privatization but has prepared a master plan which is gradually being applied by Central Zoo after privatization.
- Goals and objectives of the Central Zoo aren't clearly communicated to the lower level and there is the lack of responsibility accounting system.
- Participation of lower level in planning and decision making is nil and there is still shortage of management by objectives technique.
- The public participation approach, which helps for the entire wildlife conservation and environment protection.

Mr. Laxmi Prasad Prasai (2000) had conducted a research on a topic "Profit Planning in Ilam Tea Estate". Mr. Prasai's main focus of the study was in the current practices and effectiveness of profit planning.

The time period covered by the research was Five years from FY 050/051 to FY 054/055. Necessary information was collected from both the secondary and primary sources of data. In his research Mr. Prasai had pointed out various findings. Some remarkable findings were as follows:

- Specific goals and financial targets aren't defined clearly to achieve the basic objectives.
- There is lack of defined authority and responsible departments.
- Inadequate profit planning due to lack of planning experts planner.

- Unnecessary centralization of power so that decision making is only from top level.
- Inadequate forecasting system.
- Failure to maintain periodic performance and no system of reward and punishment.

Mr. Gopi Prasad Adhikari (1996) had conducted a research on topic "Profit Planning and Control with Reference to National Construction Company Nepal Ltd.". Mr. Adhikari had mainly focused to the budgeting and profit planning of National Construction Company Limited.

The time period covered by the research was Five years from FY 049/050 to FY 053/054. The necessary information and data were accumulated from both the primary and secondary sources of data. Various findings had been pointed out by Mr. Adhikari in his research. Some remarkable findings had been outlined here.

- There is no adequate co-ordination system and realize of objectives between different level of manager.
- Enterprise have no any financial plan.
- There is no practice of profit planning.
- Very few managers are competent to identify the relevant factor/variables and manipulate them for the successful formulation and implementation of plan.

Mr. Tulasi Prasad Shrestha (1998) had conducted a research on a topic "Profit Planning in Sri Bhrikuti Pulp and Paper Nepal Limited". Mr. Shrestha had mainly focused on the practice and effectiveness of profit planning system in SBPP.

The time period covered by the research was Five years from FY 051/052 to FY 055/056. Necessary data and other information were collected from both

the secondary and primary sources of data. In his research, Mr. Shrestha had pointed out various findings. Some of the remarkable findings were as follows:

- SBPPNL's objectives aren't much clear. Different specific financial goals aren't prepared and strategies, policies and programs aren't adequate to develop the company.
- SBPPNL doesn't consider CVP analysis while pricing the product.
- Inadequate forecasting system.
- Unnecessary centralization of power so that decision making is only from top level.

Mr. Madhu Sudan Bhattarai (1999) had conducted a research on topic "Profit Planning of Non-Manufacturing Public Enterprises in Nepal: A Case Study of Nepal Oil Corporation Limited". Mr. Bhattarai had mainly focused on the appraise of the performance of Nepal Oil Corporation.

Time period covered by the study was Five years from FY 049/050 to FY 053/054. Necessary data and other information had been accumulated from both the secondary and primary sources of data. In his research, Mr. Bhattarai had pointed out various findings. Some remarkable findings of the research were:

- Goals and objectives aren't clear.
- No clear policy in purchasing sales and inventory.
- Unable to define duties and responsibilities of the employees.
- No classification of costing.
- Red-Rapism in implementation phase of profit plan.
- Decision making power has been controlled.

Mr. Dhurba Raj Bishowkarma (1996) had conducted a research on the topic "A Study on Profit Planning and Control of Kathmandu Milk Supply Scheme". Mr. Bishowkarma had mainly focused his research in examining the techniques of comprehensive profit planning system applied by KMSS.

Time period covered by the research was Five years from FY 050/051 to FY 054/055. Necessary data and other information have been collected from both the secondary and primary sources of data. In his research, Mr. Bishowkarma had pointed out various findings. Some remarkable findings of the research were:

- No proper practice of segregating cost into fixed and variable.
- There is no specific goals and objectives.

2.41 Research Gap (Difference between the Current Research and Previous Research)

There is the gap between the present research and the previous researches. Previous researches conducted on accounting on profit planning and control covered only the budgeting practices in manufacturing companies especially in public enterprises. 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 secondary data. In some researches private data were also used. The previous researches didn't disclose which of the management accounting tools are in practice which aren't 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. It examines the current practice of management accounting tools in the listed companies of Nepal which includes Bank, Manufacturing, Finance, Insurance, Trading, Hotel and other companies. It has disclosed the reason about the tools which aren't practiced by the companies and has suggested to apply new tools such as zero base budgeting, activity costing, target costing, ROI pricing, market survey in managerial activities of planning, controlling and decision making. Probably this might be the first research study carried on this topic in Nepal.

CHAPTER THREE

RESEAFRCH METHODOLOGY

3.1 Introduction

In this chapter, efforts have been made to present and explain the specific research design for the sake of attaining to research objectives. It includes research design, nature of data, data gathering procedure, population and sample and data processing procedures.

3.2 Research Design

As per the nature of study, survey research design was followed with descriptive and analytical approach.

3.3 Sources of Data

Data were mainly collected from the primary sources. Primary data were collected through questionnaire, interview and discussions.

3.4 Population and Sample

All the companies listed in the stock exchange were considered as the total population. Out of them, the companies which were in existence and head office located in Kathmandu valley were considered as the target population for the study.

The companies were categorized into seven groups as done by the stock exchange. Stratified sampling with proportionate allocation of 41% was made.

A total of 143 companies were listed but companies with head office in Kathmandu were 90 in number. Only 90 companies were considered under target population.

The table below clearly describes total population, target population and sample drawn and sample percentage.

Table No. 3.1

Total Population, Target Population, Sample and Sample Percentage

S.N.	Types of listed Companies	Total Population	Target Population	Sample Drawn	%
1	Commercial Bank	20	20	8	40
2	Manufacturing and Processing Companies	40	20	10	50
3	Trading Companies	22	10	4	40
4	Finance Companies	30	15	7	46
5	Insurance Companies	15	15	6	40
6	Hotel	8	4	2	50
7	Other	8	6	3	50
	Total	143	90	40	44

(Source: Nepal Stock Exchange Ltd., 2008)

3.5 Data Gathering Procedure

As the study was based on primary data, information was collected developing as scheduled questionnaire and distributing it to managers and finance chief who were available. Fifteen "Tick Mark" and two "Open-End" questions were included in the questionnaire. To check whether questions could be understood or not by the respondents, questionnaires were distributed to five different companies for per-test. As positive responses were received, questionnaires were distributed to rest of the companies afterwards.

To get more reliable information, discussions were also conducted with managers and finance chief. Information collected in this way was noted down to use during analysis and interpretation of data.

3.6 Data Processing Procedure

Data collected from questionnaires were in raw form. They were classified and tabulated in the required form. Simple arithmetical percentage tools were used for analysis. Statistical tool like chi-square (χ^2) was used to test the hypothesis. Major findings were based on the analysis and interpretation of data.

3.7 Research Variable

Major 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 were the major research variables.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

The basic objective of the study was to examine the present practice of management accounting tools in the listed companies in Nepal and to identify the area where management accounting tools could be applied to strengthen the company. This chapter presents the analysis and interpretation of the data.

To meet the objectives, all the listed companies having head office in Kathmandu Valley who were in operation were taken as target population. The companies were categorized into seven groups as done by the stock exchange which was used as strata for the study. Stratified sampling with proportionate allocation of 44% was made.

Questionnaires were distributed to more than 50 companies out of which responses could be received from 40 companies. Besides questionnaires, discussions were also made with General Manager, Finance in Chief and Accountant in Chief of the companies to get more information about the present practice of management accounting tools. Views of Managers, Accountants, Finance in Chief are also included in this chapter.

Raw data were properly processed, tabulated and analyzed. They were presented into fifteen tables. Tables were developed based on question asked. Open-ended questions were arranged in a descriptive way. Hypothesis was tested with chi-square statistical tools.

4.2 Percentage Analysis of Management Accounting Practice:

Table No. 4.1

Practice of Management Accounting Tools in the listed Companies of Nepal

S. N.	Tools	Cost Segregation into Fixed & Variable			Break Even Analysis			Standard Costing			Budgeting Long Term			Budgeting Annual		
	Companies	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%
1	Com. Bank	8	2	25	8	2	25	8	-	-	8	-	-	8	8	100
2	Manf. & Procs.	10	10	100	10	10	100	10	10	100	10	4	40	10	10	100
3	Trading	4	4	100	4	2	50	4	2	50	4	-	-	4	4	100
4	Finance	7	1	14	7	5	71	7	-	-	7	4	57	7	7	100
5	Insurance	6	2	33	6	3	50	6	-	-	6	3	50	6	6	100
6	Hotel	2	1	50	2	-	-	2	-	-	2	-	-	2	2	100
7	Others	3	2	66	3	1	50	3	-	-	3	1	33	3	3	100
Total		40	22	55	40	22	55	40	12	30	40	12	30	40	40	100

S. N.	Tools	Responsibility Accounting			Capital Budgeting			Ratio Analysis			Cash Flow			Activity Based Costing		
	Companies	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%
1	Com. Bank	8	-	-	8	8	100	8	8	100	8	8	100	8	-	-
2	Manf. & Procs.	10	8	80	10	8	80	10	10	100	10	10	100	10	2	20
3	Trading	4	-	-	4	4	100	4	4	100	4	4	100	4	-	-
4	Finance	7	-	-	7	7	100	7	7	100	7	7	100	7	-	-
5	Insurance	6	-	-	6	6	100	6	6	100	6	6	100	6	-	-
6	Hotel	2	-	-	2	2	100	2	2	100	2	2	100	2	-	-
7	Others	3	-	-	3	3	100	3	3	100	3	3	100	3	-	-
Total		40	8	20	40	38	95	40	40	100	40	40	100	40	2	5

The above table 4.1 shows the current scenario practice of management accounting tools in the listed companies in Nepal. Tools practiced by different companies have been expressed in percentage. From the above table it is obvious that 100 percent of the banking companies were found practicing the tools like: capital budgeting, cash flow, ratio analysis and annual budgeting to carry out different managerial activities while 25% of the banking companies were found practicing of break even analysis and cost segregation into fixed and variable. None of the banking companies were practicing the tools like: Standard Costing, Long-term Budgeting, Responsibility Accounting and Activity Based Costing.

In case of manufacturing companies 100% of the manufacturing companies were practicing the tools like: Cost Segregation, Standard Costing, Annual Budgeting, Cash Flow and Breakeven Analysis. 80% of the companies were practicing capital budgeting, 40% were practicing long-term budgeting for managerial activities and 20% of the companies were practicing activity based costing.

Likewise in trading companies, 100% of the companies were practicing the tools like: Cost Segregation, Annual Budgeting, Capital Budgeting, Ratio Analysis and Cash Flow while 50% of the companies practiced the tools like Breakeven Analysis and Standard Costing. None of the companies were found practicing of Long-term Budgeting, Responsibility Accounting and Activity Based Costing.

Similarly, in finance companies, practice of the tools like: Annual Budgeting, Capital Budgeting, Ratio Analysis and Cash Flow were common. 100% of the finance companies were found practicing of these tools. Whereas 71% of the companies practiced break-even analysis, 37% practiced long-term budgeting and 14% practiced cost-segregation. But practice of standard costing, responsibility accounting and activity costing was Nil in finance companies.

Regarding insurance companies, 100% of the companies practiced the tools like annual budgeting, capital budgeting, ratio analysis and cash flow whereas 50% of companies practiced break-even analysis and long-term budgeting and 33% of the companies practiced cost segregation tools for carrying out managerial activities.

In hotel companies, 56% of the companies practiced cost segregation, 100% of the companies practiced annual budgeting, capital budgeting, ratio analysis and cash flow. None of the companies were found practicing of break-even analysis, standard costing, long-term budgeting, responsibility accounting and activity based costing.

In other companies, 100% of the companies practiced the tools like cost segregation, annual budgeting, capital budgeting, ratio analysis and cash flow whereas 50% of the companies practiced long-term budgeting and break-even analysis. None of the companies practiced standard costing, responsibility accounting and activity based costing.

Out of total listed companies, 100% of the companies were practicing annual budgeting and cash flow and ratio analysis, 95% capital budgeting, 55% break-even analysis and cost segregation, 30% standard costing and 20% responsibility accounting and 5% were practicing activity based costing.

Practice of annual budgeting, ratio analysis, cash flow and capital budgeting were common in every companies where as practice of responsibility accounting and activity based costing has just started. The main reasons of not practicing these tools were responsibility:

- Lack of Knowledge about the Tools.
- No Information about the Tools.
- Lack of Resources.

Table No. 4.2

Practice of Capital-Budgeting Tools in Purchasing Fixed Assets or Making Long-Term Investment Decision

S. N.	Tools / Companies	Pay Back Period (PBP)			Average Rate of Return (ARR)			Net Present Value (NPV)			Internal Rate of Return (IRR)		
		No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%
1	Com. Bank	8	4	50	8	2	25	8	8	100	8	2	25
2	Manufacturing & Processing	10	8	80	10	4	40	10	4	40	10	6	60
3	Trading	4	4	100	4	-	-	4	4	100	4	-	-
4	Finance	7	7	100	7	3	42	7	7	100	7	3	42
5	Insurance	6	3	50	6	3	50	6	4	66	6	3	50
6	Hotel	2	-	-	2	2	100	2	-	-	2	-	-
7	Others	3	3	100	3	1	33	3	-	-	3	2	66
Total		40	29	72	40	15	37	40	27	67	40	16	40

The above table 4.2 shows the present practice of capital budgeting tools in the listed companies of Nepal. From the table, it is obvious that 100% of the banking companies practiced net present value (NPV) criteria of capital budgeting, 50% practiced pay back period and 25% practiced average rate of return (ARR) and internal rate of return (IRR) to make long-term investment decision. Here, long-term signifies to the period of more than 1 year.

In case of manufacturing companies, it was found that 4% practiced NPV and 60% IRR, which 40% practiced ARR tools of capital budgeting while making decision on purchasing fixed assets.

Likewise in trading companies, 100% of the trading companies practiced PBP and NPV as the major tool of capital budgeting to make decision on fixed assets.

Finance companies practiced almost every tools of the capital budgeting but 100% of the finance companies practiced PBP and NPV while 42% practiced IRR and ARR.

Similarly, 66% of the insurance companies practiced NPV and 50% of the insurance companies practiced PBP, IRR and ARR respectively of capital budgeting techniques.

So far in hotel companies, 100% of the hotel companies practiced ARR tools of capital budgeting for capital investment decision. In other companies, 100% of the companies practiced PBP and 50% practiced ARR and IRR tools of capital budgeting where as practice of NPV was Nil for capital investment.

Out of total companies, 72% of companies practiced payback period (PBP), 67% practiced net present value (NPV) and 40% IRR and 37% ARR techniques of capital budgeting.

From the table it was obvious that NPV and PBP were the most practiced tools in banking and finance companies where hotel companies highly rely on ARR technique of capital budgeting for long-term capital investment decision.

Table No. 4.3

Budget Practice in the Listed Companies of Nepal

S. N.	Types of Budget / Companies	Cash Budget Only			Operational Budget			Overall Master Budget		
		No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%
1	Com. Bank	8	-	-	8	2	25	8	6	75
2	Manufacturing & Processing	10	5	50	10	2	20	10	7	70
3	Trading	4	-	-	4	-	-	4	4	100
4	Finance	7	4	57	7	3	42	7	3	42
5	Insurance	6	-	-	6	-	-	6	6	100
6	Hotel	2	-	-	2	-	-	2	2	100
7	Others	3	1	33.3	3	2	66	3	2	66
Total		40	10	25	40	9	22	40	30	75

The above table 4.3 shows the practice of types of budget in the listed companies of Nepal. From the above table, it is obvious that 75% of the banking companies practiced master budget while 25% of the banking companies practiced operational budget to carryout their operational activities.

Regarding manufacturing and processing companies, it was found that 70% of the manufacturing companies practiced overall master budget, 50% cash budget and 20% operational budget for operational activities.

In case of trading companies, 100% of the companies practiced overall master budget, 57% cash budget and 42% operational budget and in insurance companies 100% of the companies practiced master budget. Likewise in hotel companies 100% of the hotel companies and 50% of other companies practiced master budget.

Out of total companies, 71% of the companies practiced master budget, 25% of the companies practiced cash budget and 22% of the companies practiced operational budget for carrying out day to day operational activities.

Therefore from the table, it was found that master budget was mostly practiced tool in the listed companies of Nepal.

Table No. 4.4

Practice of Pricing Product/Services in the Listed Companies of Nepal

S. N.	Pricing Technique	Cost Based Pricing			Going Rate Pricing			Target Return on Investment Pricing			Activity Based Costing Pricing		
	Companies	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%
1	Com. Bank	8	4	50	8	8	100	8	2	25	8	-	-
2	Manufacturing & Processing	10	8	80	10	3	30	10	2	20	10	2	20
3	Trading	4	3	75	4	3	50	4	-	-	4	-	-
4	Finance	7	6	85	7	6	85	7	2	28	7	-	-
5	Insurance	6	-	-	6	-	-	6	-	-	6	-	-
6	Hotel	2	1	50	2	-	-	2	2	100	2	-	-
7	Others	3	2	66	3	2	66	3	-	-	3	-	-
Total		40	24	60	40	22	55	40	8	20	40	2	5

The above table 4.4 shows the pricing practice in the listed companies of Nepal. From the table, it is clear that 100% of the banking companies practiced going rate pricing for their service whereas 50% of the banking companies practiced "cost based pricing and target return on investment pricing" for their services.

In manufacturing and processing companies, 80% of the companies practiced "cost based pricing" while 30% "going rate pricing", 20% "target return on investment pricing" and "activity based costing pricing for pricing the product".

In trading companies, 75% of the trading companies practiced "cost based pricing" while other 50% practiced "going rate pricing" for the product or service rendered by them.

In case of finance companies, 85% of the companies practiced cost based pricing and going rate pricing and 28% of the companies practiced target return on investment pricing.

Regarding hotel companies, 100% of the companies practiced target return on investment pricing for the services rendered while in case of other companies, 100% of the other companies practiced cost-based pricing and 66% of the companies going rate pricing.

Thus, out of total companies, 60% of the companies practiced cost based pricing, 55% of the companies practiced "going rate pricing", 20% of the companies practiced target return on investment pricing.

The widely used method for pricing product or services in the listed companies of Nepal was "cost based pricing" and "going rate pricing". There was not practice of activity cost pricing in service companies like bank, financial institution, insurance companies and hotel companies due to lack of knowledge about tools.

Table No. 4.5

Practice of Transfer Pricing in the Listed Companies of Nepal

S. N.	Transfer Pricing Technique	Market Based Pricing			Cost Based Pricing			Negotiated Pricing		
	Companies	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%
1	Com. Bank	8	-	-	8	-	-	8	-	-
2	Manufacturing & Processing	10	4	40	10	6	66	10	-	-
3	Trading	4	-	-	4	-	-	4	-	-
4	Finance	7	-	-	7	-	-	7	-	-
5	Insurance	6	-	-	6	-	-	6	-	-
6	Hotel	2	-	-	2	-	-	2	-	-
7	Others	3	-	-	3	-	-	3	-	-
Total		40	4	10	40	6	15	40	-	-

The above table 4.5 shows the practice of transfer pricing in the listed companies of Nepal. From the table, it is clear that none of the banking, trading, finance, insurance, hotel and other companies practiced transfer pricing while 66% of the manufacturing and processing companies practiced "cost-based transfer pricing, 40% of the manufacturing companies practiced market-based transfer pricing".

Thus out of total companies, only 15% of the total companies practiced "cost-based transfer pricing" while 10% of the total companies practiced "market-based transfer pricing".

The main reason behind not practicing of transfer pricing in the service companies was they directly rendered service to the customer rather than department to department. As there did not arise any option whether to render service to internal department or outside customer, there was not place for transfer pricing.

Table No. 4.6

Method of Segregating Mixed Cost into Fixed and Variable in the Listed Companies of Nepal

S. N.	Methods / Companies	High-Low Point Method			Regression Method			Average Method			Analytical Method		
		No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%
1	Com. Bank	8	-	-	8	-	-	8	4	50	8	-	-
2	Manufacturing & Processing	10	4	40	10	-	-	10	3	30	10	4	40
3	Trading	4	-	-	4	-	-	4	-	-	4	-	-
4	Finance	7	-	-	7	-	-	7	2	28	7	-	-
5	Insurance	6	-	-	6	-	-	6	2	33	6	-	-
6	Hotel	2	-	-	2	-	-	2	2	100	2	-	-
7	Others	3	1	33	3	-	-	3	-	-	3	-	-
Total		40	5	12	40	-	-	40	13	32	40	4	10

The above table 4.6 shows the practice of segregation mixed cost into fixed and variable in the listed companies of Nepal. From the table, it is clear that 50% of the banking companies practiced average method to segregate mixed cost into fixed and variable.

In case of manufacturing and processing companies, 40% of the companies practiced analytical method, 40% practiced high-low point method and 30% practiced average method for segregation mixed cost into fixed and variable.

Similarly, 50% of the trading companies practiced other method of segregation mixed cost. Here, other method signifies to equation method. In hotel companies, 100% of the companies practiced average method for segregation of mixed cost into fixed and variable whereas in finance companies, 11% of the finance companies practiced average method. Similarly, 25% of insurance companies practiced average method for segregating mixed cost into fixed and variable.

Out of total companies, 32% of the companies practiced average method, 10% of the companies practiced analytical method, 12% high-low point method.

Practice of regression method for segregating mixed cost into fixed and variable was nil. The reason behind it was that regression method is statistical method which is difficult in application. Beside, it requires expert manpower in statistical methodology. Company was not found ready to hire statistical expert to segregate the mixed cost.

Table No. 4.7

Types of Decision Making Practice in the Listed Companies of Nepal

S. N.	Decision Making Practice	Make or Buy Decision			Special Order-Offer Decision			Drop or Continue any Product/Service			Lease or Buy Decision		
	Companies	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%	No. of Sample	No. of Practitioner	%
1	Com. Bank	8	-	-	8	2	25	8	-	-	8	4	50
2	Manufacturing & Processing	10	8	80	10	3	30	10	6	60	10	4	40
3	Trading	4	2	50	4	-	-	4	-	-	4	2	50
4	Finance	7	-	-	7	2	28	7	2	28	7	3	42
5	Insurance	6	-	-	6	3	50	6	2	33	6	3	50
6	Hotel	2	-	-	2	2	100	2	-	-	2	-	-
7	Others	3	-	-	3	2	67	3	-	-	3	-	-
Total		40	10	25	40	14	35	40	10	25	40	16	40

The above table 4.7 shows the types of decision making practiced by the listed companies of Nepal. From the table it is clear that 25% of the banking companies practiced "special-order offer decision" while 50% of the banking companies practiced "lease or buy decision".

In manufacturing and processing companies, 80% of the companies practiced "make or buy decision" while 60% of the companies practiced "drop or continue any product line decision", 40% of the manufacturing companies practiced "lease or buy decision" and 30% of the companies practiced "special order-offer decision".

In case of trading companies, 50% of the companies practiced "make or buy decision" while 50% of the companies practiced "lease or buy decision".

In the same way, in finance companies, 28% of the companies practiced special order offer-decision, drop or continue decision and lease or buy decision respectively.

Likewise, 50% of the insurance companies practiced special order-offer decision, while 50% of the companies practiced lease or buy decision and 33% of the companies practiced drop or continue any insurance policy service.

Similarly in hotel companies, 100% of the companies practiced "special order-offer decision" and 67% of other companies practiced "special order-offer decision".

Thus, out of total companies, 35% of the companies practiced special order offer decision" and 40% of the companies practiced "lease or buy decision", while 25% of the companies practiced "make or buy" decision and drop or continue product/service line decision.

4.3 Major Findings

On the basis of comprehensive analysis of the data, the study has following findings:

- While examining the tools practiced in the listed companies for planning controlling and decision making, it was found that capital budgeting, cash flow, ratio analysis and annual budgeting were widely practiced management accounting tools in the listed companies in Nepal. Almost 100% of the companies practiced these tools in carrying out operational activities. Activity based costing and responsibility accounting were unused tools in listed companies in Nepal.
- Regarding long-term investment decision making and fixed assets purchase decision making, companies mostly practiced "pay-back period" and net present value technique of capital budgeting. Almost 72% of the companies practiced these tools while making capital budgeting decision.
- To carryout operational activities properly, companies mostly practiced preparation of master budget. More than 75% of the companies prepared master budget. Some companies managed their activities with "cash budget" also. There were 25% of such companies, who prepared only cash budget.
- Ratio analysis and standard costing was also practiced by some of the companies. Nearly 100% of the companies practiced ratio analysis while 30% of the companies practiced standard costing tools to measure and control the performance.
- For pricing the product and services, most of the companies followed "cost based pricing" method. Almost 60% of the listed companies were found practicing this method for pricing. Except some manufacturing companies others were not found practicing "activity based costing pricing". Besides these, "target cost" pricing practice was Nil in the listed companies of Nepal.
- Practice of transfer pricing was found only in some manufacturing companies. Service companies like trade, banking, finance and insurance

were not practicing transfer pricing because of the nature and scope of the business.

- The technique of "least square method" was not practiced by any of the companies in Nepal to segregate mixed cost into fixed and variable.
- In different companies, different types of administrative and technical decision were made. Administrative decision were governed by policy, rules and regulations of the company, whereas in case of technical decision making 35% of the total companies practiced special order offer decision and 40% lease or buy decision while 25% of the companies practiced make or buy decision and drop or continue decision.
- While examining different companies, it was found that management accounting tools were in practice in one way or the other but companies were practicing most of the privileged tools of management accounting such as sensitivity analysis, judgemental analysis, past actual expenses basis for budget preparation. Companies were not practicing new advance technique of management accounting such as: zero base budgeting, activity based costing and target costing. This was because companies did not have any information and recognizance about the tools.
- From the open-end analysis, it was found that the major difficulties for application of new advance management accounting tools were respectively:

    - Lack of Information.
    - Lack of Recognizance about the Tools.
    - Lack of Expertise.

Thus, to overcome these difficulties, managers of different companies requested academician to bring such tools and techniques into light through different media.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Management effectively achieves organizational objective through the efficient use of scarce resources in a changing environment. Future is uncertain, it creates risk. To reduce risk, the only reliable weapon is good management.

Corporate firms that carryout the economic activities are the backbone of the economy. Their activities impact the economy in one-way or the other. 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 aspect of managerial activities. The main objective of management accounting is 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.

The main objective of the present research was to examine the present practice of management accounting tools in the listed companies of Nepal and to identify the area where management accounting tools can be applied to strengthen the company.

As per the nature of the study, survey type research design is followed with descriptive and analytical approach. 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 the mostly practiced tools, where as practice of tools like zero base budgeting, activity based budgeting, activity costing, target costing and value engineering are almost Nil in the listed companies of Nepal. Lack of information and extra cost burden are the main reason behind not practicing such tools.

From the hypothesis test, it was found that all the companies were independently practicing the management accounting tools. There was no significant relationship between the types of the companies and practice of management accounting tools.

5.2 Conclusion

Different types of management accounting tools, which are taught in the colleges are not found applied by the listed companies of Nepal. It shows gap between the theory and practice. Tools like capital budgeting, budget ratio analysis and cash flow are in practice but application of new tools of management accounting are not in practice.

In Nepalese listed companies, practice of hiring outside expert for carrying out different activities in almost Nil. Thus it can be concluded that Nepalese listed companies are in infant stage in practicing of management accounting tools. Nowhere in the companies can one find management accounting experts. They are with the concept that management accounting is similar to financial accounting. New tools and techniques such as: zero base budgeting, activity costing, target costing, value engineering have been developed around the globe but practice of it is almost Nil in Nepalese listed companies. Lack of information and cognizance about management accounting tools are the main factors causing problem in the application of such tools.

5.3 Recommendations

As Nepal is proceeding towards globalization and is trying to get membership of WTO, Nepalese companies should fit with the global environment. Best-fit managerial strategies should be developed. Managers should think in a global perspective. Information should be updated. For better utilization of the limited resources and achieving goal through cut-throat competition, application of advance management accounting tools can be of great help. Thus, the following recommendations based on the findings of the research study are:

- To strengthen the competitiveness of Nepalese listed companies and to carryout managerial activities, the use of management accounting tools is recommended. For planning activities, tools like budgeting, cost volume profit analysis, linear programming model of planning can be used. For controlling activities, tools like budgetary control, variance analysis, standard costing and responsibility accounting can be used. For decision making, marginal analysis can be used. While implementing any tools of management accounting, it is recommended to analyze cost and benefit of the tools.
- To implement the tools congenial environment is a must. For this sake, a separate management accounting department should be established within an organization. Management accounting experts should be hired. Those companies who cannot manage to establish separate department can manage it under their existing accounting, financing or planning department. If the company cannot hire outside experts, it can send its existing employee for short-term training. If this also is not feasible for them, they can manage it by taking service of fee-based consultant.
- Applications of management accounting tools need internal and external information. So, companies are recommended to keep management accounting information system so that they can be informative throughout the time about every aspects of management. Skill should be updated with

the every changes taking place around the external environment. Skill can be developed through training.

- Interaction between academician and companies is a must. It is recommended that companies should create an environment of interaction between the academician and the companies. Companies can benefit from their knowledge about new tools and techniques of management accounting.
- Academicians should put effort to bring advance management accounting tools into the light by conducting national seminars. Short-term training packages on management accounting should be offered for business managers to acquaint them with the appropriate techniques of management accounting and to update their knowledge and skill.
- Companies activities should not overly depend upon the traditional tools of management accounting such as: past trend analysis. For the smooth operation of the activities, they should be motivated toward the application of new, advance and modern management accounting tools such as target costing, activity costing, zero base budgeting.
- While making long-term investment decision or purchasing fixed asset, companies are recommended to apply NPV tool of capital budgeting.
- Hotel companies practicing only "ARR" tools of capital budgeting should use varieties of tools like NPV, IRR, PI to get more accurate result than ARR.
- While preparing budgeting and planning activities, companies should hire professional expert.
- Budget preparation should not be based on "actual past expenses" only. Along with actual past expenses, environmental factors should also be taken into consideration. It is because what happened in the past might not occur in the future.
- Companies who depend completely on "profit and loss" criteria to measure the performance are suggested not to rely completely on this criterion. Along with these criteria, companies are suggested to follow

criteria such as: activity, liquidity, productivity and variance analysis. Besides these, present performance of the company should also be compared with past performance of the company.

- Companies using "cost plus pricing" should use target cost pricing, activity based pricing and marginal cost pricing tools as per the case.
- Listed companies of Nepal should practice allocation of joint cost among the departments, divisions and units so that cost consumption rate per division, department or unit can be ascertained which helps in decision making regarding cost. Proper allocation of joint cost is a must in every company.
- While estimating cost and revenue for future period, companies should not be based on "past trend" only. What happened in past might not happen in future. So for the estimation, tools like: zero base, market survey and statistical tools should be practiced. This helps the company to reach to correct estimation.
- Academicians, who have cognizance about the tools should put effort to bring advance management accounting tools into the light so that person related to these field can get more information about the implementations and benefit of the tools.
- Nepalese companies should be updated with new tools that are practiced around the globe in best performing companies. For cost reduction, life cycle costing, target costing, value engineering, process reengineering, kiezen costing, just-in-time inventory management, total quality management, management audit and bench marking should be practiced. Activities performed based on traditional management accounting tool is though helpful but not sufficient in the competitive age. New methods and techniques should be thought and developed so that cost minimization can be exercised, better quality can be delivered to delight the customer.
- Out of the total profit made each year, some portion of it should be allocated for research and development program so that new tools and techniques can be developed and adopted in the companies.

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Appendix

QUESTIONNAIRES

Please put Tick mark [√] on the category your Company belongs to:

a) Bank. [ ]

b) Financial Institution. [ ]

c) Insurance Companies. [ ]

d) Hotel. [ ]

e) Trading Companies. [ ]

f) Airlines. [ ]

g) Manufacturing Companies. [ ]

General Questions

Q.N.1. Would you kindly tell which of the following mentioned management accounting tools for planning, controlling and decision making are practiced in your Company?

S. N.	Management Accounting Tools	Practice	
		Yes	No
1	Cost Segregation into Fixed and Variable		
2	Break-Even-Analysis (No Profit, No Loss Sale/Activities		
3	Standard Costing (Estimation of Cost Limit)		
4	Budgeting Long-Term		
5	Budgeting Annual		
6	Responsibility Accounting		
7	Capital Budgeting		
8	Ratio Analysis		
9	Cash Flow Statement		
10	Activity Based Costing		

Q.N.2. If your Company has not practiced any of above mentioned tools, what might be the reasons?

a) Lack of Expertise. [ ]

b) High Cost/Quite Expensive. [ ]

c) Have no Information about the Tools. [ ]

d) Other. Please Specify ....

....

Q.N.3. While purchasing fixed assets or making long-term investment decision which of the following capital budgeting tools are practiced?

a) Pay Back Period (PBP) [ ]

b) Average Rate of Return (ARR) [ ]

c) Net Present Value (NPV) [ ]

d) Internal Rate of Return (IRR) [ ]

e) Other. Please Specify ....

....

Q.N.4. How do your Company adjust for risk while evaluating capital investment?

a) Sensitivity Analysis. [ ]

b) Increase the required Rate of Return. [ ]

c) Shorten Pay Back Period. [ ]

d) Estimate Probability Distribution of Future Cash Flow. [ ]

e) Other. Please Specify ....

....

Q.N.5. What type of the Budget does your Company practice?

a) Cash Budget only. [ ]

b) Operational Budget only. [ ]

c) Overall Master Budget. [ ]

d) Other. Please Specify ....

....

Q.N.6. On what basis, does your Company prepare Budget?

a) Based on Past Budget Estimates. [ ]

b) Based on Past Actual Expenses. [ ]

c) Zero Base. [ ]

d) Activity Base. [ ]

e) Other. Please Specify ....

....

Q.N.7. Who prepares the Budget in your Company?

a) Committee. [ ]

b) Planning Department. [ ]

c) Chief of Finance Division. [ ]

d) Outside Experts. [ ]

e) Other. Please Specify ....

....

Q.N.8. What types of Budget does the Company practice?

a) Short-term Budget (1 Year or Less). [ ]

b) Medium-term Budget (3 Years). [ ]

c) Long-term Budget (5 Years and More). [ ]

d) Other. Please Specify ....

....

Q.N.9. How does the Company measure and control the overall performance at the end of the accounting years?

a) Profit/Loss made by the Company. [ ]

b) Budgeting Control. [ ]

c) Standard Costing. [ ]

d) Ratio Analysis. [ ]

e) Other. Please Specify ....

....

Q.N.10. What Techniques does the Company practice for Pricing Product/Service?

a) Cost-based Pricing. [ ]

b) Going-Rate Pricing. [ ]

c) Target Return on Investment Pricing. [ ]

d) Activities based Costing Pricing. [ ]

e) Other. Please Specify ....

....

Q.N.11. What transfer pricing Technique is practiced in your Company?

a) Market-Price based. [ ]

b) Cost based. [ ]

c) Negotiated. [ ]

d) Other. Please Specify ....

....

Q.N.12. What Technique does your Company follow to allocate joint cost?

a) Unit of Production method. [ ]

b) Sales Value Method. [ ]

c) Negotiated Basis. [ ]

d) Other. Please Specify ....

....

Q.N.13. What Techniques does the Company practice to segregate the mixed cost into variable and fixed?

a) High-Low Point Method. [ ]

b) Regression Method. [ ]

c) Average Method. [ ]

d) Analytical Method. [ ]

e) Other. Please Specify ....

....

Q.N.14. What method is followed for pricing the issue of inventory (stock) in your Company?

	Perpetual	Periodic
a) LIFO.	[ ]	[ ]
b) FIFO.	[ ]	[ ]
c) Weighted Average.	[ ]	[ ]
d) Specific Items.	[ ]	[ ]

e) Other. Please Specify ....

....

Q.N.15. What Technique does the Company practice for Cost and Revenue Estimation/Forecast?

a) Past Trend Analysis. [ ]

b) Zero Base Budgeting. [ ]

c) Market Survey. [ ]

d) Judgement Analysis. [ ]

e) Other. Please Specify ....

....

Q.N.16. What types of Decision-making does the Company practice?

a) Make or Buy Decision.

b) Special Order Offer Decision.

c) Drop or Continue any Product/Service Line.

d) Lease or Buy Decision.

e) Other. Please Specify ....

....

Q.N.17. What are the difficulties in applying management accounting tools?

Please Specify ....

....

Q.N.18. What do you suggest for the application of such tools?

Please Specify ....

....

Thank You for your Warm Co-operation!