

# CHAPTER - 1

## INTRODUCTION

### 1.1 Background of the Study

Every enterprise is established to achieve certain goal. This is possible only when the firm has a lot of resources. But in reality every firm operates its activities with scarce resources. The main problem lies in better utilization of available resources so that competitive advantage can be achieved. Management tools are powerful weapon to utilize that scarce resource and manage all activities in systematic and scientific way. Management tools are helpful from planning to decision-making. The main objective of management accounting is to “concern with the provision of information to people within the organization to help them make better decision and improve the efficiency and effectiveness of existing operation” (Drury, 2000: 4-5). "Information helps the manager in planning, controlling and decision making. So it is said that managers in all types of organization rely heavily on managerial accounting information for decision-making, planning and controlling. Managerial accounting is part of an organization's management information system. In most of corporate firms, management accounting has been a strategic business partner in support of management's role in decision-making, planning and controlling."

(Hilton, 1997:5-6)

Every management discharges basically five processes namely planning, organizing, staffing and human resources management, leading and interpersonal influence and controlling. Managers are strongly liable to implement such management processes.

Planning means setting goal for the firm, considering various ways of meeting this goal, and picking what appears to be the best ways to meet the goals. Planning is the most important function of management. "It is the process of developing private hospitals objectives and selecting a future course of action to accomplish them. It includes (a) establishing private hospitals objectives, (b) developing premises about the environment in which they are to

accomplish, (c) selecting a course of action for accomplishing the objectives, (d) initiating activities necessary to correct re-planning to correct current deficiencies."

Organization means putting together the economic resources of the firm in a way best suited to carrying out established plans. Organizing is the process by which employee and their jobs are related to each to accomplish enterprise's objectives. It consists of dividing work among groups and individual and coordinating individual and group activities. Organizing also involves establishing managerial authority.

Staffing and human resources management is the process of assuring that competent employees are selected developed and rewarded for accomplishing private hospitals objectives. Effective staffing and human resources management also includes establishing a work climate in which employees are satisfied.

Leading and interpersonal influence is the process of motivating individual or group to assist willingly and harmoniously in accomplishing enterprise's objectives.

Controlling means evaluating the firm's activities in systematic manner. Controlling is the process of assuring efficient performance to achieve the enterprise's objectives. (a) establishing goals and standards, (b) comparing measured performance against the established goals, and (c) reinforcing successes and correcting short coming.

Management is said to be an art because business needs to be operated systematically. On the other hand, there have arisen concepts and techniques based on Mathematics, statistics, and accounting. Generally speaking is a business decision, while the art of management consists in weighing the qualitative factors in the scale of the mangers judgment, experience and insight to produce the best decision in the circumstances. (Lynch, 2003: 17) Human behaviour is somewhat predictable- history does repeat itself and thus many useful quantitative data are available. Because of the predictability of many of the factors which impinge upon the business decision, it has been said that

ultimately all factors in a business decision might be quantified. This idea postulates a world of perfect certainty, in which quantitative indices could be developed to cover all conceivable situations and, any business decision could rest on the secure basis of quantitative analysis. The important of quantitative analysis in management lies in minimizing its weight in a problem. The management needs on those which cannot be quantified. Although it remains doubtful that uncertainty can ever be eliminated, there are no apparent limits to the possibility of reducing its unfavorable effects in decision-making.

Organizations are social units, established to carryout economic activities with certain objectives. Organizations play a very significant role in economic activities held in a country. It is going to difficult to survive in the competitive age. To get the success in this age of competition, a management is the good option to protect the organization from the unexpected happening in the future. An organization surely does well with good management compared to other without proper or good management practice. Organizations need various economics information. It is only possible through the management accounting information. It is already mentioned that information helps the organization from planning to decision-making. Likely other activities like staffing, human resources management, and controlling which are very important to make organization's activities successful become possible only from management accounting. Management accounting covers accounting methods, systems, and techniques, which coupled with special knowledge and ability, assist management in its task of maximizing profit or minimizing losses or risk. It is the process of implementing managerial "Principles", and "Know how" in actual behaviors to planning, developing execution and control of the corporate plan. Developing a financial structures and ensuring that the optimum use is made of business resources are as vital as the marketing and production function. A success happens while the organization able to finance and regulate the necessary funds needed to its activities. Therefore for most companies, management accounting in the appropriate for is absolutely vital. (Batty, 1982: 1-2)

Management accounting information serves major roles in organization. Management accounting provides information to the managers so that

planning, organizing, and controlling can be done in an orderly and rationally manner. The management accountant must provide a system which allows management to receive this necessary information in a useful form. It enhances decision-making, guides' strategy development and focuses effort related to improving organizational performance of organizational units. (Kaplan and Atkinson, 1998:12) The management has recognized quantitative facts planning, controlling, coordinating, motivating for the performance. It is only related to the past or present but also indicates the future trends. Management accounting has to play role in all these areas. (Gupta, 1995: 8)

Management accounting techniques is not only helpful to commercial institutions, business houses but it has much to offer to the civil services, administrations in terms of controlling cost, forecasting expenses and helping to increase the overall productivity. The role of accounting has changed to reflect prioritization in government expenses. Hence the Zero-base budgeting has been adopting which is nothing more than management by objectives (MBO) through financial management. Thus, as intelligence arm the role of accounting in the government has been to provide a base for the allocation of funds, measurement of achievement and prioritization expenses.

Management accounting would make its greatest contribution by helping management of business concern to set our civilization on a high economic level by maintaining control over multifarious and complex activities. This may be true not because the accounting is at the elbow of management in the role of servitor. It is because it has assumed the role of "alter ego", through the process and techniques of management accounting properly applied, management is not merely informed. It is stimulated for action. Its thinking is provided with standards of references vehicles of judgment and forms in which to express these judgments and to bring changes. Thus management accounting has to be regarded as an integrated part of the personality of management. (Gupta, 1995: 8-9)

## **1.2 Focus of the Study**

Private hospitals are backbone of economic development. It is good employment generator. Private hospitals are established to give benefit to the people by the government for facilitating the daily needs of the people. The government holds 51% share on those private hospitals and remaining by the general people. The main objectives of the private hospitals are to satisfy the people by providing necessities daily goods but in Nepalese context it is unable to do such thing and also unable to contribute on government revenues collection. Revenue is collected by government through tax, vat, and other things e.g. fine and penalties. These revenues collection are spent in physical infrastructure activities. Public enterprise's contribution is lower than expected. A particular business becomes successful, when management accounting provides good information. That information is not provided only to private hospitals but also to other business to make them successful. Success happens from a good management. Planning, controlling, cost, man power, cash are important step towards success. When every thing is planned and controlled, it will very easy to make future decision.

This study is mainly focused on the different types of private hospitals of Nepal. It included both listed as well as a recently privatize companies. This research is focused how and why any private hospitals practice management accounting.

## **1.3 Statement of the Problem**

Success is a matter of implementing plan systematically. Profit does not just happen. It is to be planned and managed. Management accounting provides techniques to aid management function. Nepalese private hospitals are not performing well as is evident from their annual reports. Poor performance is the outcome of poor planning, controlling and decision-making.

Do Nepalese private hospitals practice management accounting tools and techniques to carryout planning, decision-making and controlling function?

The research is focused to find out the answers

These questions:

- i. Whether Nepalese private hospitals are practicing management accounting tools?
- ii. Which management accounting tools are mostly used in Nepalese private hospitals?
- iii. What are the major difficulties in the application of management accounting tools?
- iv. In which areas management accounting tools should be implemented to strengthen the Nepalese private hospitals?

**Table No. - 1.1**  
**Sectoral Rate of Return from Public Enterprises**

<b>Year</b>	<b>1998/99</b>	<b>1999/00</b>	<b>2000/01</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05*</b>	<b>2005/06*</b>
Manufacturing	-7.71	-8.42	-8.76	-8.76	-12.7	-3.4	-4.06	-5.03
commercial	23.95	72.39	4.89	-21.1	-50.7	-62.4	-119.3	-129.3
service	-18.2	3.83	-330	52.17	-14.7	-2.61	-14.08	-21.08
social	-2.77	-2.51	-1.98	-1.5	0.25	-7.22	-6.57	-21.18
Public utility	3.84	4.67	2.74	2.46	3.02	6.07	5.64	5.65
Financial	8.23	-43.7	68.26	-11	-146	-	-	-

*Sources: Ministry of Finance, The government of Nepal*

*(\* Estimated)*

The above table no 1.1 shows that the rate of return from public enterprises. From the table it is clear that all the private hospitals rate of return is negative except only public utility sectors.

The main reasons of poor performance of the private hospitals were:

- i. Excessive political interference
- ii. Lack of adequate autonomy and accountability,
- iii. Absence of professional management and
- iv. Financial indiscipline.

## **1.4 Objectives of the Study**

The main objectives of this research were to examine and study the practice of management accounting tools in the private hospitals in Nepal. The specific objectives are as follows:

- i. To study and examine the present practice of management accounting tools in Nepalese private hospitals.
- ii. To identify the areas where management accounting tools can be applied to strengthen the Nepalese private hospitals.
- iii. To identify difficulties in applying management accounting tools in Nepalese private hospitals.
- iv. To make recommendations to overcome the difficulties in applying management accounting tools in Nepalese private hospitals.

## **1.5 Significance of the Study**

The present research work is the study of the practice of management accounting tools in Nepalese private hospitals and useful to all these who are involve in implementing of management account. This study would be significant in the following ways:It examines the application of management accounting tools in Nepalese private hospitals.

- i. It provides information on the application of the tools under different circumstance. Thus it will encourage the use of management accounting tools in decision-making to those companies who have not yet used any tools.
- ii. It will be useful to the potential investors, lenders, manager and policy makers in Nepalese private hospitals.
- iii. It will also provide literatures to the researchers who want to carry research in this field in future.

## **1.6 Limitations of the Study**

The present research has the following limitations:

- i. This research is based on basically primary as well as secondary data.
- ii. The study is concerned with management accounting. It does not consider the economic aspects of the companies.
- iii. The study is focused on only listed private hospitals. Thus findings might not be applicable to non-listed companies in Nepal.
- iv. The study pays attentions to the practice of the management accounting tools only.

## **1.7 Organization of the Study**

This thesis has been divided into five chapters. They are;

Chapter 1	Introduction
Chapter 2	Review of Literature
Chapter 3	Research Methodology
Chapter 4	Data Presentation and Analysis
Chapter 5	Summary, Conclusion, Recommendation

The introduction chapter covered background of the study, statement of problem, focus of the study, objectives of the study, research hypothesis, and significance of the study and limitations of the study.

The second chapter focused on review of literature. It contained the conceptual framework and control area of management accounting.

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

The fourth chapter deals with presentation, analysis and interpretation of data. It consisted testing of hypothesis, analysis of questionnaires, analysis of open-end opinions and majors finding of the research.

The last chapter covered summary, conclusions and recommendations.



## **CHAPTER - 2**

### **LITERATURE REVIEW**

#### **2.1 Background**

A business enterprise today operates in a dynamic environment, which creates many new problems in management. 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 the profit. Large-scale production has reduced the effectiveness of personal supervision and so has led to the decentralized of authority and responsibility. Today a great need has been felt for co-ordination and control. The tremendous industrial growth marked by the increased volume, product improvement and diversification and enhanced market area has posed a new challenge to financial planning. The existence of cutthroat competition forces every enterprise to increase operating efficiency by applying modern techniques of control and supervision.

Due to complex environment, management has to carry out its basic function of cost minimizations and maximization of profit in an atmosphere of uncertainty. 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 competition. 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 decision-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 decision and direct the administration better. (Shrestha, 1996:1)

## 2.2 Meaning and Definitions

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

Management accounting is the term used to describe the accounting methods systems and techniques, which coupled with special knowledge and ability assists 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 systems 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 design to help decision-making within the firm. Therefore the scope of management accounting extends beyond traditional measures of the cost and revenues from the transactions that have already occurred to include also information on sales, backlogs, unit's quantities, price demands and capacity resources and extensive performance measures based on physical or non financial measures. (Kaplan and Atkinson, 1998:1)

Management accounting is the presentations of accounting information to formulate the 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, organizing, staffing, directing and controlling. It presents to management accounting information in the form 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 conducted more efficiently. Management accounting is the presentation of accounting information in such a

way as to assists management in the creation of policy and day-to-day operations of an undertaking. Thus emphasis is laid down 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 assists management in its operations and functions. (Gupta, 1995:2-3)

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

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

In ordinary language "Management accounting " 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 proprietors, 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 Singh, 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

instruments of forecasting planning regulating business of economic activity. Starting with systematic recording of transaction and costs. Subsequently supplemented by integration of financial and cost records the basic structure of traditional accounting has been enlarged by financial and cost control, enriched by budgetary control, embellished 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 controllership function, financial control, operational control, management services, system work, methods and procedures production planning and other methods connected with management till recently very few people looked upon "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 the British team of accountants that visited the United States in 1950 under the auspices of Anglo-American productivity council. Since then the term has become quite familiar in U.S.A. as well as in other countries. (Goyal and Singh, 1997:6-7)

## **2.4 Evolution of Accounting in Nepal**

The history of account keeping in Nepal by government is very old. Mandev 1<sup>st</sup> the king of Nepal in Lichhavi period has circulated first coin called "Mananka Coin" during the period 464-491 A .D. Similarly King Mahendra Malla had circulated the coin named "Mahndra Mally" in Malla period in Nepal. This seems to be the main step to record the national transactions in a proper way and manner. It is said that a few number of financial transactions used to be performed in Lichhavi and Malla periods. (Auditors General's Office, 1962:1)

Written records of accounting have been tracked back after 18<sup>th</sup> centuries in Nepal. After the unification of the nation in 1768 (1825 B .S.) by

the great King Prithivi Narayan Shah, the chief of district level soldiers used to keep the accounts of the Govt. offices. (Ghiri, 1994:155)

In 1814 a book called "Laldhadda" was created for recording things about land management. (Kitab Byabastha) another book called "Mothdhadda" was used. These two records were important steps in the history of accounting in Nepal. Again, after a long gap in 1868 (1925 B.S.) an office called "Kitab Khana" was established for recording the salaries paid to Govt. personnel, which are still in use. In the process of development of accounting in 1879 (1936 B.S.), Kharidar Gunawanta a senior official that time propounded "Syaha Shresta Pranali" which was an advanced form of accounting and used up to 1965-66 fiscal year. A "Faram Shresta Pranali" was introduced in 1911 (1968 B.S.) especially to use in Terai Region (Thapa, 1994:71).

After the over thrown of Rana Regime, the 1<sup>st</sup> budget system was started in Nepal in 1951 (21<sup>st</sup> Magh 2008 B.S.). The auditor's general's office was established in 1959. Before it, there was a Kumari chock, and office to do the audit jobs. In 1960 (2017 B.S.) the "Bhuktani Shresta Pranali" was adopted which was little bit based on the 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 2<sup>nd</sup> Chaitra 2018 B.S.) and it become a new accounting system of H.M.G. of Nepal. But it was put into practice only from the fiscal year 1962/063 for the budget appropriation and from 1974/75 for the revenue it is used.

Besides, controlled accounting seemed to be used through the implementation of budgeting systems, since 2008 in Nepal. Budgeting practice is nothing but revenue and control expenditure. Since 2008, faint practice of management accounting seemed in Nepal.

## **2.5 Brief Analysis Management Accounting Tools**

Management accounting is a technique, which helps to discharge management functions like planning, organizing, staffing, directing and controlling properly and efficiently. (Paul, 1994: 5)

The management accounting tools available to discharge management functions are as follows:

Such tools can be identified as such:

## **2.6 Methods of Mixed Cost Segregations**

### **2.6.1 The high-low method**

This method considers two level of activity to bifurcate the cost. It considers the output at different levels. For separating semi-variable cost into fixed & variable cost, two level of activity high and low are taken with their corresponding cost. Therefore, the difference in cost and difference in activity level are ascertained. The difference in cost between highest and lowest level of activities are divided by the difference in activity or output. The result of division is variable cost per unit.

$$\text{Variable Cost} = \frac{\text{High Cost} - \text{Low Cost}}{\text{High Unit} - \text{Low Unit}}$$

### **2.6.2 Least square method**

Least square method is a statistical method. It follows regression equation to segregate mixed cost into variable. It is an accurate and trusted method of segregation fixed and variable cost from mixed cost. In this method, first of all, variable cost per unit is calculated. Then fixed cost is calculated.

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum X^2 - (\sum X)^2}$$
$$a = \frac{\sum X^2 \sum X - \sum X \sum Y}{N \sum X^2 - (\sum X)^2}$$

where, b = variable cost per unit

a = Fixed cost per unit.

### **2.6.3 Visual-Fit method**

A method in which the cost analyst visually fits a straight line through a plot of all the variable data, not just between the high point and low point, making it more reliable than the high low method. If the cost function for the data is linear, it is possible to visualize a straight line through the scattered points that comes reasonably close to most of them data. (Hongren, 2001: 97)

### **2.6.4 Analytical method**

This method also known as “Degree of variability” techniques 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 for the cost varies with volume, variable overheads under this method computed as follows:

$\text{Variable overhead} = \text{Budgeted mixed overhead} \times \text{Degree of variability.}$   
(Brown & Howard, 1964: 249)

## **2.7 Cost Allocation and Apportionment**

Cost allocation is tracing and reassigning costs to one or more cost centres. Cost objectives such as activities, departments, customers or product. (Hongreen, 2001: 124) There are two popular method of allocating the cost of services department. They are:

### **2.7.1 Direct method**

Direct method of cost allocation ignores the costs of services between departments and allocates all services department cost directly to producing department. (Hongren, 1991: 328) In direct method cost cannot be controlled. Even it is very easy method, but difficult to identify an actual cost.

### **2.7.2 Step method**

It provides for allocation of a departments cost to other service departments as well as to producing departments in a sequential manner. The

sequence begins with the department that provides the greatest amount of services to other departments. After its costs have been allocated, the process continues step by step ending with department providing the least amount of services other services departments. (Dangol, 2056: 159)

## **2.8 Product Costing**

Product costs can be identified with goods produced or purchased for resale. (Hongren, 1991 128) Two popular methods drawn for product costing are Variable costing (Direct/ marginal costing) and Absorption costing (Fixed costing). Variable costing and absorption costing are not the system of costing like process, operating, batch or job costing rather they are the tools or techniques of product costing. (Khan & Jain, 1993: 345)

### **2.8.1 Variable/ Direct Costing**

A direct costing method includes only variable manufacturing costs. Variable costing is more accurately perceived as direct or marginal costing as it applies only the variable production costs to the product. This costing approaches that fixed manufacturing overheads is regarded as an expired cost to be immediately charged against sales not as an unexpired cost to be held back as inventory of charged against sales later as a part of cost of goods sold. Further more the direct costing approach to the inventorying of costs is not confined to only direct material and labor. It also includes on indirect cost the variable manufacturing overheads as a part of product cost. (Hongren, 1991: 539) The only thing that can affect net income under direct costing is a change in sales- a change in production has no impact when direct costing method is in use. A cost has service potential and is therefore an asset only if its incurrence now will make it unnecessary to incur the same cost again in the future. Service potential is therefore said to hinge on the matter of future cost avoidance. It is said that such a cost can in no way represent a future benefit or service.



## **2.8.2 Absorption Costing**

Absorption costing includes both variable and fixed manufacturing overheads in the product costs that flow through the manufacturing accounts. It absorbs all cost necessary to production. It considers fixed manufacturing overhead as a part of product cost. Net income is affected by changes in production when absorption costing is in use.

## **2.9 Use of Variable and Absorption Costing**

Absorption 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 costing for internal reporting purpose. 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 there a report to shareholder's and tax authorities. (Hongreen, 1991: 538-539)

## **2.10 Standard Costing**

Historical costing is not an effective method of exercising cost control because it does not provide yardstick with actual performance may be compared. Historical costing is not preceded by planned costs which are a must for effective cost control planned cost or standard cost is a pre-determined cost based on a technical estimate for material, labor, 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 cost, when standard costs are used for the purpose of cost control, the technique is known as "Standard Costing". Therefore standard costing is preparation of standard costs and applying them to measure the variations from standard costs and analyzing the causes of variations with a view to maintain maximum efficiency in production. This technique is complementary to the actual costing can be historical costing system. The system of standard costing can be used in all

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

## **2.11 Most widely used Standard**

Standards are categories into categories They are:

### **2.11.1 Ideal (Perfection) standard**

Ideal standard is the expression of the absolute minimum costs possible under the best, conceivable conditions, using specification and equipment. No provision is made for wastage, spoilage, machine breakdowns and the like. This approach maintains that the resulting unfavorable variances 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 & Narang, 1992: 5.234)

### **2.11.2 Practical (Current attainable) standard**

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 varies from company to company. There are two interpretations of practical standards. The first interpretation has standard set just tightly enough so that employees regard their fulfillment as highly probable if normal effort and diligence are exercised. (Hongren, 1991: 217)

## **2.12 Variance Analysis**

The deviation of the actual cost or profit or sales from the standard cost or profit or sales is known as variance. Variance analysis is helpful in controlling the performance and achieving the profits that have been planned.

When 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 variance and it is indicator of inefficiency of the organization.

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

### **2.13 Budgeting**

A budget is a detailed plan outlining the acquisition and use of financial and other resources over some given time period. It represents a plan for the future expressed in formal quantitative terms. The act of preparing a budget is called budgeting. The use of budgets to control a firm's activities is known as budgetary control.

Budget is a comprehensive and coordinated plan for operations and resources of private hospitals expressed in the financial terms for achieving organizational objectives. It is a mechanism to plan future activities to realize the expectation of the firm. It is one of the comprehensive approaches that have been developed to facilitate effective performance of the overall management process. It is a systematic and formalized approach for performing significant phases of management planning and control function.

### **2.14 Master Budget**

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

### **2.14.1 Operational budget**

Operational budgets are concerned with the process of preparing the budget of each physical activities/ operation of a firm. Such as production, sales, purchasing, debtors collection and creditors payment schedule. In specific term an operating budget has the following components.

#### **2.14.1.1 Sales Budgets**

Sales budget is the budget, which forecasts future sales of each product in each region in each unit of time. A sales budget should be prepared to shown the detail like product wise, region wise, and time sales to meet overall objectives of the organization. Sales budget is the foundation of all other budgets. Therefore, a sales plan should be realistic. A realistic sales plan incorporates such management decision as objectives, goals, and strategies and translates than into planning as volume of goods, price and amount by region, product and time. Sales budget is prepared from sales forecast. A sales forecast encompasses potential sales for the entire industries as well as potential sales for the firm-preparing forecast.

#### **2.14.1.2 The Production Budget**

After sales budget has been prepared, the second step is production budget. Production budget is concerned with determining the quantity of the production to be produced each unit of time. Production budget is prepared to coordinate the sales budget and inventory policy of organization. The production requirement for the forth coming budget period can be determined and organized in the form of a production budget sufficient goods will have to be available to meet sales needs 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 can be determined by adding budgeted sales units to the desired ending inventory from the total. (Hongren, Foster & Datar, 1999: 182)

$$\text{Pr oduction units} = \text{Planned sales} + \text{Clo sin g stock} - \text{Opening stock} .$$

### **2.14.1.3 Purchase Budget**

In case of merchandising firm, instead of preparing production budget it would prepare 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, except that it shows goods to be purchased rather than goods to be produced.

$$\text{Purchase} = \text{Material usage} + \text{Closing stock of raw material} - \text{Opening stock of raw material}$$

### **2.14.1.4 Direct material budget**

After production budget needs have been computed, a direct material budget should be prepared to show the materials that will be required in the production process. Sufficient raw materials will have to be available to meet production needs and to provide for the budget period part of this raw materials requirement will already exist in the form of a beginning raw material inventory. The remainder will have to be purchased from supplier.

### **2.14.1.5 Direct labor budget**

The direct labor budget is also developed from the production budget. Direct labor requirements must be computed 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 forces as the situation may required. Direct labor requirement can be computed by 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 type of labor needed. The hour of direct labor time resulting from these computations can then be multiplied by the direct labor cost per hour to obtain budgeted total direct labor cost.

$$\text{Direct Labor Cost} = \text{production} \times \text{standard usage rate} \times \text{wages rate}$$

#### **2.14.1.6 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 by cost behaviour for budgeting purposes and a predetermined overhead rate developed. This rate will be used to apply manufacturing overhead to units of products throughout the budget period.

#### **2.14.1.7 The selling and administrative overhead**

The selling and administrative expenses overhead budget contains 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 on selling and administrative matters. If the number of expenses items is very large, separate budgets may be needed for the selling and administrative functions.

### **2.14.2 Financial budgets**

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

#### **2.14.2.1 The budgeted income statement**

The budgeted income statement is one of the key schedules in the budget process. It is concerned with forecasting total assets and properties and capital and liabilities of the company by time period. It is the document that tells how profitable operations are anticipated to be in the forth coming period. After it has been prepared, it stands as a benchmark against which subsequent company performance can be measured. (Garrison, 1985: 313)

#### **2.14.2.2 The cash budget**

Cash budget shows cash receipt, cash disbursement and the balance cash. The cash budget is composed of four major sections

- The receipt sections
- The disbursement sections
- This cash excess or deficiency sections
- The financing sections

The receipt sections consist of the opening balance of cash added to whatever is expected in the way of cash receipts during the budget period. The major sources of receipts will be from sales. The disbursement sections consist of cash payments that are planned for the budget period. Those payments will include raw material purchase, direct labor payments, manufacturing overhead cost and so on. Other cash disbursements are income tax, capital equipment purchase, dividend payment and so on.

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

The financing sections provide a detailed account of the borrowing 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 is to ensure that sufficient cash is available at all time to meet the level of operations that are outlined in the various budget. Cash budget can help a firm to avoid cash balances that are surplus to its requirement by enabling management to take steps in advance to invest the surplus cash in short term investments. The cash budget should be broken down into time periods that are as short as feasible format cash budget is given below.

### **2.14.2.3 Budgeted balance sheet**

The budgeted balance sheet is developed by beginning with the current balance sheet an adjusting it for the data contained in the other budgets. (Garrison, 1985; 315)

## **2.15 Zero Base Budgeting**

Zero base budgeting is a method of budgeting in which managers are required to start from Zero level every year and to justify all costs as if the programs involved were being initiated for the first time. By this means, no costs are viewed as being on going in nature. The manager must start at the ground level and present justification for all costs in the proposed budget, regardless of the type of cost involved.

Zero base budgeting differs from traditional budgeting, in which budgets are generally initiated on an incremental basis, that is, manager starts with last year's budget and simply adds to it (or subtract from it) according to anticipated needs. The manager does not have to start at the ground each year and justify on going costs (Such as salaries) for existing programs. (Gautam & Bhattarai, 2004: 360)

Zero base budgeting though is not really new concept, only the review of the departmental costs. Manager's are in ad-vocation since long time in depth review of departmental cost. this review should be done annually, zero based budgeting lays sown where as critics of zero base budgeting says it should done every five years or so. The only difference is the frequency of review of departmental cost. (Garrison, 1985: 317)

## **2.16 Activity Based Budgeting**

Activity based budgeting is a technique of allocating manufacturing overheads to products using multiple application rates and a wide variety of costs drivers in multi- product firm. It maintains the relationship between overheads costs and the activities that cause them. The manufacturing costs are based up on certain cost driver and the increasing and decreasing ratio of costs depends upon the quantity of cost driver. Activity based budgeting focuses on the cost of activities to produce and sell products and services. It separates indirect costs into separate homogenous activity cost pools. Management uses the cause and effect criterion to identify to cost drivers for each of these indirect cost pools. The following steps are taken in activity based budgeting.



- Determine the budget costs of performing each units of activity at each area.
- Determine the demand for each individual activity based on budget, production, new product development and so, on.
- Computed the cost of performing each activity and activity based budgeting is facilitated by activity based costing. The benefits can be enjoyed from activity based budgeting is ranked as such:
  - Ability to set a more realistic budget
  - Better identification of resources needs
  - Linking of costs to output
  - Identification of budgetary slack (Hongren, Foster & Datar, 1999: 190)

## **2.17 Flexible Budget**

A budget prepared at different level of activity is a flexible budget. Flexible budget will furnish the budgeted figure for any level of activity, which a company may actually attain. It reflects costs, revenues and profits at the various level budgeted activities. It is also called a variable budget, step budget, sliding scale budget, expenses formula budget, dynamic budget, expenses control budget and so on. It is a budget that permits revision of estimates of operating cost and profit, which changes in sales or production volume. This budget is prepared on the basis of time, demand of product, and cost of product, availability of demands of product, cost of product, season and availability of factor of production. A budget prepared at a single level of activity with prospect of modification in the light of the changed circumstances is fixed/ static budget.

- It is difficult to forecast the future activity accurately, which demands some degree of changes to cope within the business environment. In the case a flexible budget can be used comfortably to reduce the margin of deviation between estimation and actual performance. A flexible budget enables an organization to estimate the expenditure at different level of activity. It is used as a yardstick to measure the efficiency at the level of

performance achieved and tools for controlling the cost. The flexible budget approach says “Give me any activity level you choose, and I will provide a budget tailored to that particular level under flexible budgeting, budgets are drawn for a series of possible sales and production volumes including the actual. In the beginning of the period, budgets are constructed for a no. of alternative production volume to take case of the changing market conditions and government policies. Instead of making a point estimates for a single most likely outcomes, schedules of cost and revenues are made for a range of possible outcomes.

## **2.18 Capital Budgeting**

Capital budgeting is the process of planning and controlling the Strategic (Long Term) and Tactical (Short Term) expenditure for expansion and contraction of investments in operating (Fixed) assets. It is the use of funds to obtain operational assets that will (a) help to earn future revenues or (b) reduce future cost. (Welsch, Hilton & Gordorn, 1999: 394)

Capital Budgeting is the process of investment evaluating, planning and financing major investment projects of an organization. The capital budgeting decision involves a current outlays or services of outlays of cash resources in return for an anticipated flow of future benefits. In other word, the capital budgeting is an evaluation system of capital expenditure decision which involve current outlays but are likely to produce benefits over period of time longer than one year. These benefits may be either in the form of increased revenue or reduction in costs. So, its management includes addition, disposition, modification and replacement of fixed assets.

Capital budgeting is defined as “the planning for the promotion campaign and development of available capital for the purpose of maximizing the long term profitability of the firm. The capital is relatively scarce and non human resources of productive private hospitals. It may also be defined as the firm’s decision to invest its current funds most effectively in long term activities in anticipation of an expected flow of future benefits over a series of

years from the discussion, the feature of capital budgeting can be pointed as (a) a relatively high degree of risk and a relatively long term period between the initial outlays and the anticipated return. (Fago, Subedi, & Gyawali, 2004: 12.3)

Capital expenditures are investments because they require the commitment of resources today to receive higher economic benefits (i.e. profit) in the future. Capital expenditures become expenses in the future as they're related goods and services are being used to earn higher future cost savings. The related future expenses, such as depreciation expenses, are identified with the future periods when the capital additions are used for their intended purpose. Therefore, capital expenditure involves two planning and controlling phases: (1) investment and (2) expenses. A major issue in planning expenditures is the problem of ensuring that a company has the capacity to produce, acquire, or be able to deliver the goods and services that will be needed to meet its sales and services plans. A major issue in controlling the actual expenditures of funds is the problem of ensuring that the actual expenditure are consistent with the plans and that funds are available when the expenditures are incurred. Capital budget is directly related to a company's operating assets and cash. So, it has two major characteristics as (a) major capital additions and (b) minor or small capital expenditure beside this other primary characteristic is its time dimension. This means that a capital budget must include (a) a strategic (Long term) capital budget and (a) a tactical (short term) capital budget. (Welsch, Hilton & Gordon, 1998: 395)

Capital budgeting is the planning to expenditure whose return stretches them beyond a one-year time interval. It is the process of deciding whether or not to commit resources to a project whose benefit would spread over several time periods. It considers proposed capital outlays and their financing. The main exercise involved in capital budgeting is to related 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 geniuses and lively interest on the part of economists, financial analysis, and accountant in managerial approaches to capital budgeting decisions. Capital budgeting has three expects. 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 of 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 n the total volume of investment to be made has also to be taken into account. Through these three aspects are interwined it is extremely difficult to weave them together in one harmious whole so, that the way may be passed for optimum investment decision. (Goyal & Singh, 1997: 101)

### **2.18.1 Method of measuring the economic value of a capital budgeting**

More purposes for projects are at the threshold of the business form comparing to its ability and willingness to finance. Some proposals are goods, other 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 & Singh, 1997: 108)

For this purpose numerous methods of measuring the economic value (investment worth) of an investment can be found in management accounting and financing. The methods of appraising capital expenditure proposal can be classified into two board categories:

#### **2.18.1.1 Discounted cash flow (DCF) methods**

The discounted cash flow methods explicitly recognize the effects of the time value of money and in that way measure economic value or investment worth as a true interest rate. The basic concept is that investment cost is cash out flow at a present value, and the related cash inflows necessarily are future values. These future cash inflows must be discounted to their present values so that they can be appropriately subtracted, added and compared with investment cost. The true rate of interest for any investment is the rate that will discount

the future net cash inflows to a sum that exactly equals the investment cost. Discounting cash flows covered following methods:

#### ***2.18.1.1.1 Net present value method (NPV)***

Net present value is the method evaluating capital investment proposals by finding the present value of the net cash flows, discounted at the rate of return required by firm. NPV method is important because it gives a direct measure of the amount benefit to the firm's shareholder. 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, target rate, hurdle rate, discount rate, cut-off 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 inflow is zero, or positive, the project is desirable and if negative it is undesirable. When choosing among several investments, the one with largest net present value is the most desirable. (Hongren, 1991: 392)

This method requires determination of three items for a project;

- Initial cash outflows
- Future net cash inflows
- Target rate of return

If the computed amount difference between the initial net cash investment (the net present value cash paid for the investment) and computed present value of the net cash inflows from the investment is favourable (i.e. positive) to the net cash inflows, the project will earn more than the target rate of return. If the difference is not favourable to the net 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 (absent any other compelling factor). (Welsch, Hilton & Gardon, 1998: 409)

*Decision criterion*

It should be clear that the Decision rule used in NPV method is to accept the investment projects if its net present value is positive ( $NPV > 0$ ) and to reject it if the net present value is negative ( $NPV < 0$ ). Positive NPV generates more cash than is needed to service its debts and contribute to net wealth of the stockholders, which result in the increased price of a firm's share. Negative NPV is doesnot generate more cash than is needed to service its debts and to contribution net wealth of the shareholders. Thus the NPV rules are

- Accept if  $NPV > 0$
- Reject if  $NPV < 0$
- May accept if  $NPV = 0$

An NPV of zero signifies that the projects cash inflows are just sufficient to repay the investment capital and to provide the required rate of return on that capital. It implies that the firm is indifferent between accepting and rejecting the project. However in practice it is rare if ever such a project will be accepted as such a situation. Simply implies that only the original investment has been recovered. As decision criteria this method can be used to make a choice between mutually exclusive projects. Using the NPV methods, project would be ranked in order of net present values; that is first rank will be given to the first priority with highest positive net present value and so on.

#### ***2.18.1.1.2 Internal rate of return (IRR) method***

The internal rate of return is defined as that discount rate which forces the present value of a projects expected cash inflows to equal the present value of the projects expected cost.

The value of IRR will cause the sum of the discounted receipt to equal the initial cost of the project, making the equation equal to zero, and that value of IRR is the internal rate of return.

IRR techniques is also known as yield on investment marginal efficiency of capital, marginal productivity of capital, marginal efficiency of capital rate of return, time adjustment 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 is however if different in both cases. In the case of the present value method the discount rate, usually the cost of capital, its 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 outlays and the cash proceeds of the project which is being evaluated for acceptance or rejection. It is, therefore, appropriately referred to as internal rate of return. IRR has following advantages (a) it avoids the necessity of selecting a target or minimum rate of return for discounting (b) the true rate of return on an investment is computed (c) it bases preferences on the true rate of return (rather than on an amount difference called net present value) and (d) it does not have the re-investment burden.

#### *Decision criterion*

The decision rule is used in the IRR method, to accept the project if its internal rate of return is higher than the opportunity cost of capital ( $r > k$ ). The project shall be rejected if its internal rate of return is lower than the opportunity cost of capital ( $r < k$ ). The decision maker may remain indifferent if the internal rate of return is equal to opportunity cost of capital. Thus the IRR decision rules are:

- Accept if  $r > k$
- Reject if  $r < k$
- May accept if  $r = k$

Note:  $K$  is known as the required rate of return, cutoff or hurdle rate. (Compiled book of finance, 2005: 118)

#### **2.18.1.1.3 Profitability index**

Yet another time-adjusted capital budgeting method is the profitability index. The profitability index is similar to the net present value approach. The profitability index measures the present value of return per rupee invested. While the NPV shows the

present value of return in lump sum. A ratio of total present value of cash flow and initial cash outlays is called profitability index. The profitability index is calculated as under;

$$\text{Profitability Index} = \frac{\text{Total Present Value (TPV)}}{\text{Net Cash Outlays (NCO)}}$$

#### *Decision criterion*

Using the profitability index, a project will accept when the profitability index is greater than 1 ( $p > 1$ ). When profitability index is less than 1 ( $p < 1$ ) project will be rejected. 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 greater than one, will be negative when profitability index is less than one. Thus the NPV and PI approaches give the same result regarding the investment proposals.

- Accept if  $PI > 1$
- Reject if  $PI < 1$
- May accept if  $PI = 1$ .

#### **2.18.1.2 Non-discounted cash flow method**

This is the traditional method of measuring investment worth. This method does not consider the time value of money. This method does not evaluate the future money with present value. The following techniques are applied under this method.

##### ***2.18.1.2.1 Pay back period (PBP)***

The pay back period is very simple and traditional method of measuring investment worth. The pay back period defined as the expected number of years required to recover the original investment. This method answer the questions; how many year will take for the cash benefit to pay the original cost of an investment, normally disregarding salvage value cash benefit here represents, CFAT, ignoring interest payment. Thus PBP measures the no. of



years requires for CFAT to pay back the original outlays required in investment proposal.

There are two way of calculating PBP. The first method can be applied when the cash flow of the project is equal during the period of project's life i.e. CFAT are uniform. In such situation the initial cost of the investment is divided by the constant annual cash flow.

$$PRP = \frac{\text{Investment}}{\text{Constant annual cash flow}}$$

The second method is used when the annual CFAT are unequal. In such situation, PBP is calculated by the process of cumulating cash inflows till the time when cumulative cash flows become equal to the original investment outlays.

#### *Decision criterion*

The pay back period can be used as a decision criterion to accept or reject investment proposal. One application of this technique is to compare the annual pay back i.e. the pay back set up the management in terms of the maximum period during which initial investment must be recovered. If the annual pay back 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.

#### ***2.18.1.2.2 Average rate of return***

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

$$ARR = \frac{\text{Average annual profits after taxes}}{\text{Average investment over the life of the project}} \times 100$$

The average profit after taxes are determined by adding up the after tax profits expected for each year of the projects life and dividing the result by the number of year. In case of annuity, the average after tax profits is equal to any year's profits.

### *Decision criterion*

With the help of the ARR, the financial decision maker can decide whether to accept or reject the investment proposal. As an accept reject criterion, the actual ARR would be compared with a pre-determined of 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, other wise; it is liable to be rejected. Alternatively the ranking method can be used to accept or reject proposals. Thus, the alternative proposals under consideration may be arranged in the descending order of magnitude, starting with the proposal with the highest ARR and ending with the proposal having the lowest ARR. Obviously, projects having higher ARR would be preferred to projects with lower ARR.

## **2.19 Budget Variances**

In any control process, the comparison of the actual result with planned or budget goals has been emphasized as one of the very basic parts of the budget. Comparison is associated by the performance reports. Performance reports contain a basis feature of reporting of variance between actual and theoretical goals. Variance is the deviation between budgeted or planned goals and actual results obtained. As performance reports show such variances, the next step is to analyze such variances and to determine the underlying causes for managerial planning and control purposes. Variances analysis is the determination of the reasons for a reported variance, whether favorable or unfavorable. The difference between standard costs and actual cost is variance. If the variance is significant, a careful management study should be made to determine the underlying cause. The underlying causes rather than the actual

results, should lead to remedies through appropriate corrective action by efficient management.

## **2.20 Analysis of Risk and Uncertainty under Capital Budgeting**

Risk is a factor, which arises due to inability of decision maker to make actual forecast. Generally, management does not prefer higher risky projects. The analysis of risk and uncertainty is an important element in the capital budgeting decision. The risk is the variability of the actual returns from expected returns in terms of cash flows. The capital budgeting decision is based on the benefits derived from the project and those benefits are measured in terms cash flow. The estimation of future return is done on the basis of various assumptions. The return of project in terms of cash inflows depends upon the factor like price, sales volume, effectiveness of the advertisement campaign, competition, cost of raw materials, manufacturing costs and so... on. Those factors depend upon the variable like the state of the economy, rate of inflation etc. The actual return in term of cash inflow may be different than the estimated cash flow. This is technically referred as a risk. The term risk in the investment decision may be defined as the differences in the actual return from the project in the future over its working life in relation to the estimated return as forecast at the time of the initial capital budgeting decision.

The decision situation with reference to risk analysis in capital budgeting decision can be divided into (1) uncertainty (2) risk (3) certainty.

The main distinction between risk and uncertainty is that risk involves the situation in which the probabilities of the particular event for future activities are already know but under uncertainties those probabilities are not already known. The term risk and uncertainty will be used interchangeably to refer to an uncertain decision making situation.

In the conclusion, risk with reference to capital budgeting results from the variation between the estimated and actual returns. The greater the variability between the two considers as a highly risky projects and lower the

variability between the two is considered as lower risky project. (Fago, Subedi, & Gyawali, 2004: 12.26)

## **2.20.1 Various techniques for risk analysis**

For analysis for risk and to make the reliable decision regarding capital budgeting, the following techniques are used:

### **2.20.1.1 Traditional techniques**

#### ***2.20.1.1.1 Risk adjusted discount rate (RAD)***

The risk adjusted discount rate (RAD) approach is one of the simplest and the most widely used methods for incorporating risk into capital budgeting decision. Under this method, the amount of risk inherent in a project would have relatively high discount rates and relatively safer projects would have relatively lower discount rates. The risk-adjusted discount rates presumably represent the differential risk in different classes of investment. The rationale for using different RAD's for different project is as follows. The cost of capital ( $k$ ) is the minimum acceptable required rate of return.

#### *Decision criterion*

This approach can be used with both the NPV and IRR

- i. If NPV is possible by using the risk adjustment rates proposal would be qualified for acceptance
- ii. If NPV were negative by using the risk adjusted rates proposal would qualified for reject.

#### ***2.20.1.1.2 Certainty equivalent co-efficient***

Under this method, the risky ness of the project is taken into consideration by adjusting the expected cash flows and not the discount rate. This method does not consider risk premium in discounting process. For analysis of risk under the certainty equivalent co-efficient method, two types of

cash a flow of a project is estimated which are risky cash flow and risk less cash flow.

$$\text{Certainty equivalent coefficient of variance} = \frac{\text{Risk less cash flow}}{\text{Risky cash flow}}$$

### *Decision criterion*

The decision criterion here can either be the NPV methods or the IRR method. Using the NPV method, the proposal would be accepted if the NPV of the certainty equivalent cash inflow is positive, other wise it would be rejected. If the IRR method is employed, the internal rate of return (r), that equates the present value of certainty equivalent cash inflows with the present value of the cash inflows, would be compared with the risk free discount rate. As the practice with this method, if r exceeds the risk free rate, the investment project would be accepted. If not, would be rejected.

#### ***2.20.1.1.3 Sensitivity analysis***

The reliability of the NPV and IRR of the project depends upon the reliability of the forecasts of variable on estimated cash inflows. It involves a number of possible outcomes in evaluating a project for providing to the decision makers on different outcomes. The sensitivity analysis provides different cash flow estimate under three assumptions.

- The worst (the pessimistic/ conservative)
- The expected (the most likely/ moderate)
- The best (the most optimistic/ aggressive)

The large in the difference between the pessimistic and optimistic cash flow is considered as riskier project and vice- versa. The accepting or rejecting the projects depends upon the attitude of decision maker toward the risk.

Sensitivity analysis enables managers to assess how responsive the NPV is to changes in the variable, which are used to calculate it. The application of sensitivity analysis can indicate those variables to which the NPV is most sensitive, and the extent to which these variables may change before the

investment result in a negative NPV. Sensitivity analysis indicates why a project might fail. Management should review any critical variables and also pay particular attention to controlling those variables to which NPV is particularly sensitive, once the decision has been taken to accept the investment.

## **2.20.1.2 Statistical techniques**

### ***2.20.1.2.1 Assignment of probabilities***

The concept of probability for incorporating risk in evaluating capital budgeting proposals. The probability distribution of cash flows over time provides information about the expected value of return and the dispersion of the probability distribution of possible returns. On the basis of the information an accept- reject decision can be taken.

The application of this theory in analyzing risk in capital budgeting depends upon the behavior of the cash flows, from the point of view of behavioral cash being (a) independent or (b) dependent. The assumption that cash flows are independent over time signifies that future cash flows are not affected by the cash flows in the preceding or following year. (Compiled book of account, 2004: 1226)

#### *Decision criterion*

1. NPV must be positive to accept the project
2. IRR must be greater than cost of capital to accept projects.

### ***2.20.1.2.2 Standard deviation***

Standard deviation that measures of the tightness, or variability of a set of outcomes. Standard deviation is defined as the square roots of the mean of the squared deviation where is the difference between an outcomes and the expected value of all outcomes.

Greater the standard deviation is said the higher degree of risk and lower the standard deviation is said the lower degree of risk. The project, which has higher degree of standard deviation, is not generally accepted and vice-versa.

#### ***2.20.1.2.3 Co-efficient of variance***

Co-efficient of variance (C.V.) standardized measure of the risk per unit of return, calculated as the standard deviation divided by the expected return.

$$C.V. = \frac{\text{Standard deviation}}{\text{Expected cash flow}}$$

Higher the co-efficient of variation is considered as the higher degree of risk and lower the co-efficient of variation is considered as the lowest degree of risk. (Weston, 1996: 190)

#### ***2.20.1.2.4 Decision tree***

The decision tree (DT) approach is another useful alternative for evaluating risky investment proposals. The outstanding feature of this method is that it takes into account the impact of all probabilistic estimates of potential outcomes. In other words, every possible outcome is weighted in probabilistic terms and then evaluated. The DT approach is especially useful for situations in which decisions at one point of time also affect the decisions of the firm at some later date. Another useful application of the DT approach is for projects which require decisions to be made in sequential parts.

A decision tree is a pictorial representation in tree form which indicates the magnitude, probability and inter-relationship 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 referred to as the decision-tree method. A decision tree shows the sequential cash flows and the NPV of the proposed project under different circumstances.

## **2.21 Financial Statement Analysis**

Financial statement analysis involves a comparison of a firm's performance with that of other firm's in the same line of business, which often is identified by the firm's industry classification. Financial is a summarized view of financial position and operation of the firm. Financial analysis is used to determine the firm's financial positioning order to identify its current strength and weakness and to suggest actions that might enable the firm to take advantage of its strength and correct its weakness.

Financial statement analysis is important not only for the firm's managers but also for the firm's investors and creditor. Internally; financial manager use the information provided by financial analysis to help make financing and investment decision to maximize the firm's value. Externally, creditors and stockholders use financial statement analysis to evaluate the attractiveness of the firm as an investment by examining its ability to meet its current and expected financial obligation. (Weston and Brigham, 1996: 78)

## **2.22 Technique of Financial Statement Analysis**

Basically the following techniques are used in financial statement analysis.

### **2.22.1 Ratio analysis**

The ratios are designed to show relationships between financial statement accounts within firms and between firms. Translating accounting numbers into relative value, or ratio, allows us to compare the financial position of one firm to another firm, even if their sizes are significantly different. It is used for measuring liquidity, solvency, profitability and management efficiency of a firm equal useful to the internal management, prospective investors, creditors and outsider. It is very important accounting tools also.

Ratio analysis is a tool of scanning financial statement of the firm. Through this, one comes to know that in which areas of the operation the



organization is strong and in which areas it is weak. Ratio analysis of the business private hospitals centers of measuring or guide concerning the expected capacity of the firm to meet its future financial obligations or expectations. It is a mathematical relationship between two related item expressed in quantitative forms. The relationship can be expressed as: (1) percentage (2) fraction (3) proportions of number. Ratio reveals the relationship in a meaningful way so to as to enable to draw conclusions from them. Rationale of ratio analysis lies in the fact it makes related information comparable

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

#### **2.22.1.1 Liquidity ratio**

Liquidity is the pre-requisite for the very survival of a firm. It shows the relationship of a firm's cash and other current assets to its current liabilities. It measures the short-term solvency position of the firm. The importance of adequate liquidity in the sense of the ability of a firm to meet current or short term obligations, when they become due for payment. The short-term creditors of a firm.

#### **2.22.1.2 Leverage ratio**

Leverage ratio can be said as financial leverage which shows long term solvency position of the firm in its ability to assure the long term creditors with regard to (a) periodic payment if investors during the period of the loan and (b) payment of principal on maturity or in pre-determined installments at due dates. It helps to know the relationship of long-term debt with shareholders fund or total capital.

#### **2.22.1.3 Profitability ratio**

Profitability ratio is an indicator of efficiency of the business organization. Profitability ratio measures the managements overall efficiency

as shown by the return generated from sales and investment. Higher profitability shows the efficiency of the management.

#### **2.22.1.4 Activity ratio**

Funds of creditors and owners are invested in various assets to generate sales and profit. The better the management of assets, the larger the amount of sales. Activity ratios are employed to evaluate the efficiency with which the firm manages the utilized its assets. These ratios are called turnover ratios, because they indicate the speed with which assets are being converted or turned over into sales. Activity ratio, thus involves 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)

### **2.23 Investment Analysis**

#### **2.23.1 Cash flow estimations 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 sales of equipment or investment in or recovery of working capital. The opportunity cost and the time value of money are tied to the cash following in or out of the organization not to the source of the cash. (Khan & Jain, 1993: 15)

One of the biggest challenges is determining those cash flows relevant to decision making. Relevant cash flows that differ 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
- Working capital
- Income tax impacts on cash flows. (Dangol & Prajapati, 2001: 837)

## **2.24 Cash Flow Analysis**

All business activities are carried on with cash and all profitable activities must result in a net inflows of cash. It is therefore useful to establish activities must result in a net inflow of cash. It is therefore useful to establish. The quantum of the flows 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 operation. (Gupta, 1997: 30.2)

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

- Transaction motive
- Precautionary motive
- Speculative motive

A cash flow basically includes two parts (a) cash inflows and (b) cash outflows. Cash inflows arise from transactions such as cash sales, collection of accounts and notes receivable, interest received on investment, sales of capital assets and miscellaneous income sources. While cash outflow arises from payment of material, direct labor, expenses, capital additions retirements of debt and dividend paid. The cash flow analysis while planning cash inflows and outflows ignore the non-cash items such as depreciations, amortization etc.

## **2.25 Decision-Making**

Decision-making is an important function of management accounting. It is the process of choosing the best alternative among available alternatives. Manager's life is filled with a constant series and decisions like where to invest profits, what to do about an employee who is not performing well where should the firm's new warehouse be built, what subject should receive top priority at the departmental meeting, which product should be accepted or not, make or buy the component, what to produce, what to sell, what types of advertisement

is launched, where, when, how about production and distribution etc. It is one of the ways through which managers influence the efficient and effective accomplishment goals. 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.

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. (Stroner, Freeman & 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 cost which are avoidable or which changes with the change in alternatives are relevant and vice- versa. The following costs such as;

- Variable cost which changes
  - Opportunity cost
  - Avoidable cost
  - Differential cost are the relevant cost where as,
  - Sunk cost and
  - Committed costs are irrelevant from decision-making perspective.
- (Khan & Jain, 1993: 830)

### **2.25.1 Decision situation**

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

#### **2.25.1.1 Sales volume related decision**

Such decision covers:

### ***2.25.1.1.1 Special order***

One decision situation relates to increase in sales to increase in sales volume outside the normal marketing pattern. Typically examples of such type of sales are acceptance of special orders, one-time quality 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 contribution.

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

### ***2.25.1.1.2 Disposing of inventories***

Pricing decision must consider the relevant market ability 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 sunk costs and therefore irrelevant to be decisions. (Khan & Jain, 1993: 831)

### ***2.25.1.1.3 Loss leaders***

Sometimes an item may be deliberately priced so low that the firm has to suffer loss in the expectation that conditional sales will be generated, which will offset the loss. Such sales are referred to as loss leader. (Chat Field, Neilson & Denis, 1983: 389)

### ***2.25.1.2 Sell now or further process decision***

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 stage/point. In deciding at what stage to sell the product the two critical variables are (a) identification of sunk costs 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

returns relevant to the decision in the difference between the costs that are incurred beyond the decision point at the revenues idle as a result of not processing the product further and if they could be diverted to some other use, opportunity cost would be also become relevant to the decision analysis. (Garrison, 1985: 557)

#### **2.25.1.3 Make or buy decision**

Many firms have to choose between manufacturing certain components themselves and acquiring them from outside supplier. 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. (Hongreen, 1991: 136)

#### **2.25.1.4 Addition/Elimination of product lines/ divisions/ shift/ 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 division criterion would be the segment margin. The segment margin equals segments contribution margin less fixed costs that are directly traceable to that segments. (Garrison, 1985: 45)

#### **2.25.1.5 Short-term use of scarce resources**

Incremental analysis can be also used to allocate resource that is limited in quantity. This requires that alternatives course 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. (Hongren, 1991: 136)

### **2.25.1.6 Joint outputs of common processing operations**

A decision faced by the management is whether to sell joint outputs at the split-off point or process them further. The decision criterion should be to choose the alternatives which will maximize the total contribution of the various joint products to the common processing costs before the split-off point are sunk cost that have already been incurred to create the joint 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 from the common processing cost can be varied. (Hongren, 1991: 141)

### **2.25.1.7 Operate or shut down**

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

## **2.26 Price of the Product and Service**

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 change 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 decision.

Pricing decisions are decision that managers make about what to charge for the products and services they deliver. The pricing of the 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 private hospitals. As the price changed on products largely determine the quantities customers are willing to purchase, the setting of prices indicates 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. An economic theory indicates that companies acting optimally should produce and sell units until the marginal revenue equals 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 situations. Thus management accountant has different perspective regarding pricing decisions. They consider cost as the key factor to pricing decisions of the standard product. (Hongren, Foster & Datar, 1999: 430-431)

Not all pricing decisions can be approached in the way as economics theory describes. Some pricing of the 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 other 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 pricing

### **2.26.1 Cost Plus Pricing**

Cost plus method is the simplest and easy method to use. Cost plus pricing policies provides stability to pricing decision and a defensible rationale for the price increase. Cost plus pricing is widely used in practice to establish a starting point in the process of determining a price. Cost plus formulas are simple; they can be applied mechanically without taking the time of management. They make possible for a company with hundreds of product or services to cope with the tasks of updating prices for existing products and setting initial prices for new product.



Cost plus pricing formulas can be used effectively with a variety of cost definitions, but the mark-up percentage must be appropriate for the type of cost used. It is imperative that price-setting managers understand that ultimately the price must cover all costs and a normal profit margin. Generally cost plus pricing is computed as

$$\text{Price} = \text{cost} + (\text{mark up percentage} \times \text{cost})$$

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

- Absorption approach
- Contribution approach (Compiled book of account, 2004: 934-939)

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

Under contribution approach in cost plus pricing to compute the cost, only the variable manufacturing overhead is taken into the consideration and then to add some mark-up percentage enough to cover fixed manufacturing overhead, selling and administrative overhead target selling price. (Hongren, Foster & Datar, 1999: 133-436)

### **2.26.1.1 Determining the mark- 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)

$$\text{Mark - up\%} = \frac{\text{Desired return on assets employed} + \text{Selling \& ad ministrative exp.}}{\text{Volume in units} \times \text{units cost of manufacture}}$$

Under contribution approach, mark up % is computed as such

$$\text{Mark-up \%} = \frac{\text{Desired return on assets employed} + \text{fixed costs}}{\text{Volume in units} \times \text{unit variable expenses}}$$

### 2.26.2 Target cost pricing

Most of the companies set the price of new product to earn sufficient revenue to cover all costs and desired profit. Peter Ducker said “this is true but irrelevant; customers do not ensure manufacturer a profit. The only sound way to price is to start out with what the market is willing to pay”.

Target pricing is based on the target costing. Target costing is a method of determining the cost of product based on target price that customers are willing to pay. The marketing department determines a target price before designing and introducing a new product.

Target cost = Anticipated selling price – Desired profit.

Generally, the target price is determined at level, which helps the company to achieve a desired market share and sales volume. Under this method, product cost is calculated by deducting anticipated profit from anticipated selling price. If the product cost is above the target cost, then the product designer focuses on modification of design of the product so that it reduces the cost of product to target cost. (Fago, Subedi, & Gyawali, 2004:9.21)

Developing target prices and target cost requires the following;

- Developing a product that satisfies the needs of potential customer.
- Chose a “target price” based on customers’ perceived value for the product and prices completions charge and a target operating.
- Income per unit.
- Drive a target cost per units by subtracting the target operating.
- Income per unit from the target price.
- Perform value engineering to achieve target cost.

### **2.26.3 Variable cost pricing**

Under variable costing method, pricing of product is determined by adding mark up to variable expenses, the conditions under which a price based on variable cost is appropriate are as follows:

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

### **2.26.4 Full cost pricing**

Under this method of pricing, selling price is determined by adding certain percentage of mark up on total production cost of goods and services. The total cost includes all variable manufacturing costs as well as fixed manufacturing cost for determination of selling price.

In long run, price must cover all cost and normal profit margin. Full cost pricing system covers all variable costs, fixed cost as well as required level of mark up. It provides a justifiable price those trends to be perceived as equitable by all parties. Consumers generally understand that a company must make a profit on its product or services in order to remain in business. Justifiable a price as total cost of production, sales and administrative activities plus a reasonable profit margin seems reasonable to buyers. (Fago, Subedi & Gyawali, 2004: 9.2)

### **2.26.5 Transfer pricing**

When one division of an organization provides goods and services to another division it charges price to the division. Transfer prices are the amount charged by one division of an organization for the goods and services that is supplied to another division of the same organization. Transfer prices represent the value of goods or services transfer to other division. When one division supplied goods and services to another division, they have to be expressed in monetary value; such monetary value expression is known as transfer pricing.

Transfer pricing is also known as Intra Company pricing. The transfer pricing is a revenue to one division on the return of providing goods and services where as it is a cost to another division for acquiring of goods and services. Transfer pricing is necessary where out put of one division becomes output on other division. (Fago, Subedi, & Gyawali, 2004: 9.30)

### **2.26.6 Method of transfer pricing**

- i. Market based transfer pricing
- ii. Cost based transfer pricing
  - Full cost transfer pricing
  - Variable transfer pricing
- iii. Negotiated transfer pricing
- iv. General Formula approach to transfer pricing

#### **2.26.6.1 Market based transfer pricing**

Transfer price based on market value of the product or services is known as market based transfer pricing. Generally, market pricing is used for determination of transfer pricing of the product. Market based transfer pricing is appropriate when both buying and selling divisions are operating at full capacity. Both the buying and selling divisions can buy and sell at market price. The internal transfer pricing may be then external market price less marketing cost.

$$\text{Transfer Pricing} = \text{Market price} - \text{selling and distribution expenses.}$$

#### **2.26.6.2 Cost based transfer pricing**

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

### **2.26.6.3 Negotiated transfer pricing**

Under this method, the transfer price is negotiated between the transferor and transferee by considering the factors like demand and supply, quality of product, time of delivery etc. Selling price is negotiated between buying and selling division. When the goods are not sold into market the manager of the organizations makes a negotiation for determining selling price, which is known as negotiated transfer pricing.

### **2.26.6.4 General formula approach to transfer pricing**

There is no hard and fast rule for transfer pricing which would lead to optimal decision for an organization as a whole. According to general rule, the transfer price is set in that point which helps to recover the variable costs plus opportunity costs.

## **2.27 Review of the Previous Studies**

Research on 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 practice 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.

**2.27.1 Miss Kalpana Bhattari (2004)** had conducted a research on the "Budgeting in Public Enterprises; a Case Study of Nepal Telecom" an unpublished master level thesis submitted in Shanker Dev Campus. The main objective of the study is to examine the application of profit planning in NTC. The necessary data and other information were collected from secondary as well as primary sources of data. The time period covered of the research was five years from the FY 2055/56 to the FY 2060/61. In her research, she had

pointed out various Objectives and Findings. Some remarkable objectives were as follows:

- To examine the practice and effectiveness of profit planning in NTC.
- To observe the NTC's profit planning system on the basis of budgeting system.
- To provide suggestions for improvement of efficient planning or budgeting of NTC's in near future based on findings.

Some major findings were as follows:

- Budgets are prepared just to fulfill the formalities which are not used effectively for profit planning process.
- Long term and short term budgets are prepared but long term budget is confined only able to the top level.
- The corporation is not able to maintain proper co-ordination between various directorates in regard to the goal and objectives of the corporations.
- The corporation fails to analyze its strengths and weaknesses in depth because of the absence of the competitors.
- Lack of skilled planners and experts.
- Gap between actual production and actual sales.

**2.27.2 Mr. Bodha Raj Tripathi (2005)** had conducted a research in the topic “Profit planning in Manufacturing Private hospitals of Nepal: a case study of Harisiddhi Brick and Tile Factory Ltd in 2005” an unpublished master level thesis submitted in Shanker Dev Campus. The period covered by his study was of 14 years starting from FY 2047/048 to FY 2060/61. Necessary data were collected from primary and secondary sources. The basic objectives of the study were to examine how far the different functional budgets were being applied as tools of profit planning in manufacturing private hospitals. Some remarkable findings were as follows:

### **Major findings of the research works were:**

- Specific goals and targets are not clearly defined and developed based on the reality and to achieve the basic objectives of HBTF Ltd.
- The co. has not prepared the targeted annual program and budgets systematically while implementing the profit plan.
- There is a wide gap between annual sales and targeted sales.
- Excessive fixed cost together with limited capability to increase sales is responsible for not operating at BEP.
- The achievement of the company is very poor because of inability of management to control over financial charges.
- The performance of HBTF Ltd is efficient after privatization- in terms of, additional investment, product diversification and capacity expansion but poor in terms of sales revenue maximization.
- The factory is suffering from poor profit planning due to lack of planning expertise in factory.
- The company is facing the major problems of shortages of funds, working capitals and also suffering from weak implementation system. The control system has not been developed at different level of authority the punishment and reward systems should be strictly followed to improve the preference.
- An expense has not been classified systematically.
- The company fails to maintain its periodic performance and there is not proper reward and punishment system to motivate employees.

The future of the factory is not bright unless it attempts to use planning techniques, instructions etc. properly.

**2.27.3 Mr. Ailendra Kumar K.C. (2006)** had conducted a research on the topic "Management Accounting Tools in Public Enterprise" an unpublished master level thesis submitted in Shanker Dev Campus. He had focused his study to examine the practice of Management Accounting Tools in public

enterprises. Mr. K.C.'s research was based on only primary sources of data. In his research, he had pointed out various objectives & findings. Some remarkable objectives were as follows:

- To study and examine the present practice of management accounting tools in public enterprises in Nepal.
- To identify the areas where management accounting tools can be applied to strengthen the public enterprises.
- To identify difficulties in applying management accounting tools in Nepalese public enterprises.
- To make recommendations to overcome the difficulties in applying management accounting tools in Nepalese public enterprises.

Some major findings were as follow:

- Different types of management accounting tools, which are tough in the colleges, are not found applied by public enterprises.
- Management Accounting is help to mangers to formulate organizational strategies as well as policy. PE's as practicing Management Accounting tools such as Capital Budgeting, Annual Budgeting, Cash Flows and Ratio Analysis. And not practicing Management Accounting Tools such as Zero Base Budgeting, Activity Based Budgeting, Activity Based Costing, Target Costing and Value engineering.
- In PE's hiring outside experts for carrying out different activities are almost nil because of high cost.
- PE's are with the concept that Management Accounting is similar to financial Accounting tools.

**2.27.4 Mr. Krishna Bdr. Karki (2006)** had conducted a research study of "Management accounting practice in Joint Venture Banks of Nepal" an unpublished master level thesis submitted in Shanker Dev Campus. He had focused his study to examine the practice of Management Accounting tools in



Joint Venture Banks of Nepal. Mr. Karki's research study was based on only primary sources of data collection. In his research, he had pointed out various objectives & Findings. Some remarkable objectives were as follows:

- To study and analyses the present practice of management accounting tools in the Joint Venture Banks of Nepal.
- To identify the areas where management accounting tools can be applied to strengthen the banks in commercial activities.
- To make recommendations to overcome the difficulties in applying management accounting tools in Joint Venture Banks.

Some major findings were as follow.

- Different types of Management Accounting tools, which are tough in the colleagues are not found applied by the Joint Venture Banks.
- Management Accounting is help to managers to formulate organizational strategies as well policy for decision making.
- In NJVBs, practice of hirings outside expert almost nil. Thus it can be concluded that NJVB's are in infant stage in practicing of Management Accounting tools. Now, here in the bank cannot find Management Accounting experts.
- In NJVBs practicing the Management Accounting tools such as Capital Budgeting, Annual Budget, Ratio Analysis and Cash Flow. And not practicing Management Accounting tools such as Zero Base Budgeting, Activity Based Costing, Target Costing value engineering.
- They are with concept that TIA is similar to financial accounting.
- Lack of information and cognizance about Management Accounting tools are the main factors causing problem in the application of such tools.

**2.27.5 Mr. Narayan Prasad Acharya (2006)** had conducted research study on topic "Management Accounting practice in Nepalese Public Enterprises" an unpublished master level thesis submitted in Shanker Dev Campus. He had focused his study to examine the practices of Management Accounting tools in

NPE's. Mr. Acharya's research study was based on only primary sources of data collection. In his research, he had pointed out various objectives & findings. Some remarkable objectives were as follows:

- To study and examine the extent of practice of Management Accounting tools and techniques made in Nepalese PEs.
- To identify the business sector, where Management Accounting tools can be applied to strengthen the PEs.
- To identify the major difficulties for applying the Management Accounting tools in Nepalese companies.
- To make recommendation to overcome the difficulties in applying Management Accounting tools and techniques in Nepalese PEs and other business companies.

Some major findings were as follow:

- Different types of Management Accounting tools, while are tough in the colleges are not found applied by the NPE's. So, it shows gap between the theory and practice. Managerial Accounting is a new discipline and still in developing stage in the context of modern business organization.
- In NPE's not practicing Management Accounting tools such as Standard Costing, Cost Segregation and allocation activity based costing. The use of overall Master Budgets was very low. Activity Based Budgeting and Zero Base Budgeting were not proper practicing to prepare the budget.
- The pricing Strategy was completely based on cost of production and government's decision.
- The traditional inventory valuation technique FIFO was widely practiced.
- NPE's overall performances are fully measure by profit & loss account.
- In NPE's past trend was most used technique to forecast the future cost and revenue.

- Government's policy was affecting to more than half of NPE's for making the account related decisions.
- Role of Management Accounting tools and technique were found negligible for making Management Accounting related decision.

**2.27.6 Mr Dul Kumar Shrestha (2008)** had conducted a research on the topic "Management Accounting Practices in the Public Trade Companies of Nepal" an unpublished master level thesis submitted in Shanker Dev Campus. He had focused his study to examine the practice of Management Accounting tools in Public Trade Companies in Nepal. Mr. Shrestha's research was based on only primary sources of data. In this thesis he had pointed out various objectives and findings. Some remarkable objectives were as follows:

- To find out the Management Accounting tools and techniques in PTCs in Nepal.
- To identify the process of planning, controlling and decision making process of PTCs in Nepal.
- To identify the management policy towards the Management Accounting tools and techniques.
- To identify the major difficulties in using Management Accounting tools and techniques in PTC's in Nepal.
- To make suggestions to overcome the difficulties in practicing Management Accounting tools and techniques in PTCs in Nepal.

Some major findings were as follows:

- Management Accounting is help to managers to formulate organizational strategies as well as policy. PE's as practicing Management Accounting tools such as Capital Budgeting, Annual Budgeting, Cash Flows and Ratio Analysis.
- Management Accounting is help to managers to formulate organizational strategies as well policy for decision making.
- Lack of information and cognizance about Management Accounting tools are the main factors causing problem in the application of such tools.

- Nepalese Public Trade Companies were prepared budget by committee, planning department and chief of finance division mostly. It is also recommended to take outside experts service for budget prepared.
- Nepalese Public Trade Companies should practice not only full cost pricing and transfer costing pricing but also activity base cost pricing and variable cost pricing.
- Nepalese Public Trade Companies should use not only profit and loss account but also use/practice Standard Costing, Budgetary Control, Ratio Analysis, Cash Flow Analysis and Activity Based Costing for evaluation of overall performance of companies at the end of the accounting year.

**2.27.7 Mr. Niranjana Dallakoti (2008)** had conducted a research on the topic "A study on Management Accounting Practices in Civil Aviation Authority of Nepal" an unpublished master level thesis submitted in Shanker Dev Campus. He had focused his study to examine the Management Accounting tools practiced in CAAN. Mr. Dallakoti's research was based on primary and secondary data collection. In his research, he had pointed out various objectives and findings. Some of remarkable objectives were as follows:

- To study and examine the Management Accounting tools practiced in CAAN.
- To identify the difficulties in applying Management Accounting tools in CAAN.
- To identify the Management Accounting tools not in use.
- To recommend the areas where Management Accounting tools can be applied to strengthen the organization.
- To make recommendation to overcome the difficulties in applying Management Accounting tools in CAAN.

Some major findings were as follows:

- CAAN was facing challenges in collection of the overdue/outstanding revenues from airlines and other clients. A substantial proportion of due was with Nepal Airlines Corporation, NECON air and COSMIC air etc.
- It is the ground reality that the transportation service through out the nation is quite difficult due to its geographical structure. So that in most part of the country the only assess of transportation is possible through air services. The construction of aerodromes and its regular operation is very much expensive than others. Even in huge loss, CAAN was operating large numbers of airports for its public responsibilities as a service provider but due to that government was not providing any subsidies to CAAN.
- In some cases, the aerodromes were constructed, on the interest of political leaders and parties even the future perspective is very poor. Such airports were made on grants or loan from different sectors and transferred all the responsibilities to CAAN.
- Civil Aviation Academy was functioning as a sole institution to train manpower required for CAAN in various disciplines like air traffic services, rescue and fire fighting servies, radio maintenance, aviation safety, computer etc. There was no such faculty on the academy to provide trainings concentrating managerial and accounting disciplines. For these trainings, huge amount was paying to outside training centers.
- A study on Management Accounting practices in civil aviation authority of Nepal.

**2.27.8 Miss. Tika Thebe (2009)** had conducted a research on the topic “The Balance Scorecard: Measuring total Business unit Performance (A Comparative Study of Commercial Banks)” an unpublished master level thesis submitted in Shanker Dev Campus. The main objective of her study is comparison of Nepal Investment Bank Limited and Kumari Bank Limited by using balance scorecard a tool of strategic Management Accounting. The specific objectives of this study are as follows: The necessary data and other information were collected from secondary as well as primary sources of data. In her research, she had pointed out various objectives and findings. Some remarkable objectives were as follows:

- To assess the total business performance of each company from financial, customer, internal business process and learning and growth perspectives.
- To compare the two companies on the basis of above four perspectives and identify the one company stronger than others on various factors.
- To determine the relationship between financial indicators with non financial indicators.

Some major findings were as follow:

- With the help of rank correlation, it has found that the weight given by both banks on financial, customer, internal business process and learning and growth perspectives are highly associated.
- After the test of cause effect model, out nine objects, five objects developed by KBL have zero correlation while only one object with NIBL has zero correlation.
- Among four perspectives three perspectives favour NIBL. It shows the better performance of NIBL through BSC approach.

**2.27.9 Mr Dipak Kumar Shrestha (2009)** had conducted a research on the topic “Management Accounting Practices in The Public Financial Sector in Nepal” an unpublished master level thesis submitted in Shanker Dev Campus. The main objective of her study the state of practices of Management Accounting Tools in financial sectors in Nepal. Mr. Shresths's research was based on only primary collection. In his research, he had pointed out various objectives and findings. Some of remarkable objectives were as follows:

- To evaluate the process of planning controllingt and decision making process of Public Finanacial Sector in Nepal.
- To identify the major difficulties for practicing the Management Accounting tools in Public financial Sectors Nepal.
- To make suggestion and recommendation to overcome the difficulties in Public Financial Sector in Nepal.

Some major findings were as follow:

- The types of budget practiced in PES's of Nepal were operational budget, Cash Budget, Master Budget and Program Budget. Almost PFS's of Nepal practiced operational budget while some prepared master budget. Cash budget and Program Budget were Practiced too and most of PES's of Nepal practiced operational budget only for carryout operational activities.
- Reasons for not practicing Management Accounting Tools were lack of expertise, high cost/quite expensive, no information about the tools and governmental policy.
- The past budget estimate of historical expenses were the basis used for preparation of budget. Zero base budgeting was not practiced because of government policy and unwilling of the management.

## **2.28 Research Gap**

The previous researches were conducted on Management Accounting tools in different sector of Nepalese public enterprises. They were like a case study of a particular company and comparative study of two different companies. The findings of the previous researches were mostly based on secondary data. In some researches primary data were also used. The pervious researches didn't disclose which of the management accounting tools were in practice which was not and why? Thus to fill up these gap the current research was conducted. This research was a survey type of research. It is purely based on the primary sources of data. It examined the current practice of management accounting tools in Nepalese private hospitals. It disclosed the reason about the tools which were not practiced by the companies and suggested for applying new tools such as zero base budgeting, activities like planning, controlling and decision making for making private hospitals ever more successful.

## **CHAPTER - 3**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Research Methodology is the way to solve systematically about the research problem (Kothari, C.R., 1990). The evaluation of the establishment of PEs is the achievement of objectives performance of many private hospitals in Nepal. This study basically helps to conclude the implementation of managerial tools in private hospitals and recommend the useful and meaningful points so that all concerned can achieve something from this study. To accomplish the goal, the study follows the research methodology described in this chapter.

#### **3.2 Research Design**

This study attempted to analyze the practice of management accounting tools by private hospital organization of Nepal. Primary data were used beside that secondary data were also used. The research was based on primary data, there descriptive research design was used.

#### **3.3 Source of Data**

The information and data were collected through primary sources, but secondary data also were used. Discussion and interview with managers', account personals and staff of private hospital organization were taken as the sources of primary data. The secondary sources of data publication, news paper and website of the selected private hospital organization.

#### **3.4 Population and Sample**

All the private hospital organizations were considered as the total population. Out of them, the private hospitals, which were in existence and head office located in Kathmandu valley were considered as the target population for the study, A stratified random sampling with proportionate



allocation method were followed. Stratified sampling with proportionate of 30% was made.

A total of 47 Private hospital were now in existence. Only 7 out of them were considered as target population.

### **3.5 Data Gathering Procedure**

As the study was based on primary data, information was collected developing a structured questionnaire. Structured questionnaires were to managers, chief accountants and finance chief that were available.

### **3.6 Data Processing Procedure**

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

### **3.7 Research Variable**

Preparation of income statement, cost volume profit analysis, budgeting, decision making practices, standard costing, ratio analysis, Zero base budgeting and pricing techniques were the major research variables involved to study the practice of management accounting in private hospital of Nepal.

## **CHAPTER - 4**

### **PRESENTATION AND ANALYSIS OF DATA**

#### **4.1 Introduction**

The basic objective of the study is to examine the present practice of management accounting tools in the private hospitals in Nepal and to identify the area where management accounting tools could be applied to strength the firm.

To meet the objectives, all the private hospitals in operation having head office in Kathmandu Valley were taken as target population. There were seven hospitals which were used under stratified sampling with proportionate representation of 30%.

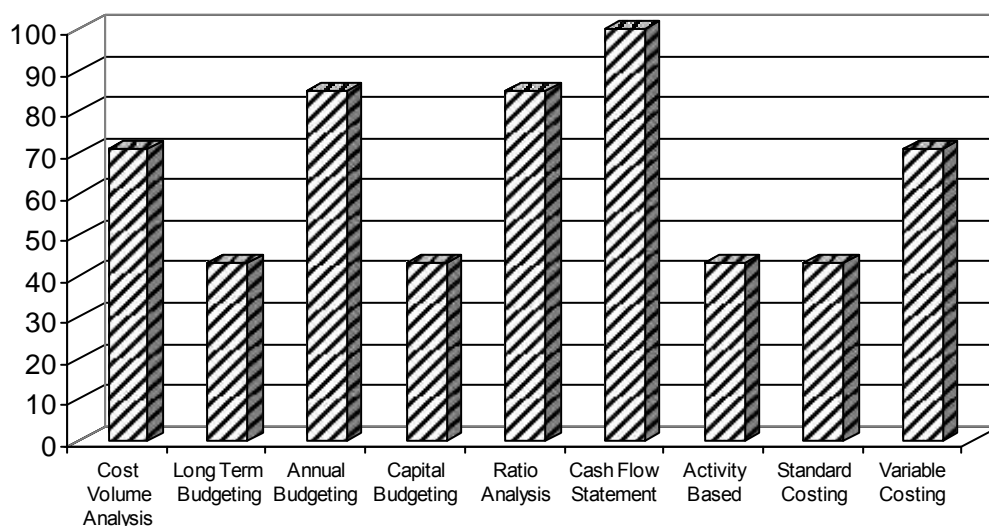
Questionnaires were distributed to 13 private hospitals. A total of 7 private hospitals have taken it as positive response. Beside this direct discussion was made with manager, account person, and senior person in the company. They took it as a positive response. The data collected through direct discussion is also including in this chapter.

## 4.2 Percentage Analysis of Management Accounting Practices

Table No. - 4.1

### Practice of Management Accounting Tools in the Private hospitals

S.N.	Management Tools	No. of Sample	No. of Practitioners	Percentage (%)
1.	Cost Volume Analysis	7	5	71
2.	Long Term Budgeting	7	3	43
3.	Annual Budgeting	7	6	85
4.	Capital Budgeting	7	3	43
5.	Ratio Analysis	7	6	85
6.	Cash Flow Statement	7	7	100
7.	Activity Based	7	3	43
8.	Standard Costing	7	3	43
9.	Variable Costing	7	5	71



The above table no. 4.1 shows scenarios of the practice of management accounting tools in the private hospitals in Nepal. Management Accounting Tools practiced by different hospitals have been expressed in percentage. From the above table it is obvious that cash flow statement were used by 100% of private hospitals, Ratio Analysis, annual budgeting were used by 85%, Cost

Volume Analysis and Variable Costing were used by 71%, Long Term Budgeting, Capital Budgeting, Activity Based Costing and Standard Costing were used by 43% respectively.

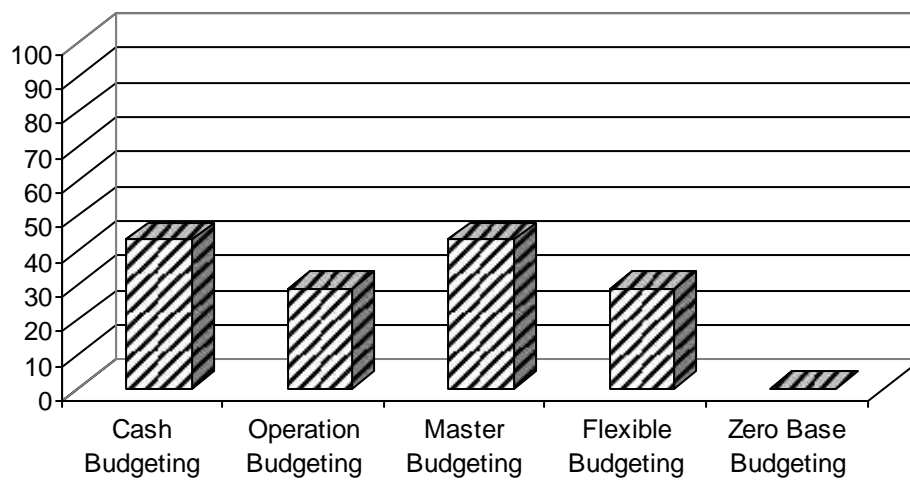
Practice of cash flow statement, ratio analysis, annual budgeting, cost volume profit and variable costing were common in every private hospitals where as long term budgeting, capital budgeting, activity based costing and standard costing were almost not in practice.

The main reasons of not practicing these tools.

- Lack of knowledge about tools
- No information about the tools
- Lack of resources
- Lack of skilled manpower
- Lack of willing to trained the staff.

**Table No. - 4.2**  
**Budget Practices in the Private Hospitals of Nepal**

S.N.	Types of Budget	No. of Sample	No. of Practioners	Percentage (%)
1.	Cash Budgeting	7	3	43
2.	Operation Budgeting	7	2	29
3.	Master Budgeting	7	3	43
4.	Flexible Budgeting	7	2	29
5.	Zero Base Budgeting	7	0	0

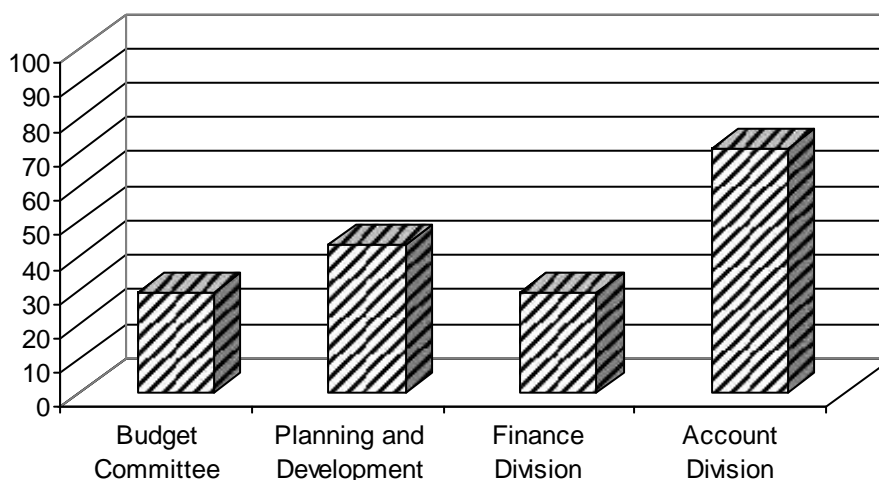


The above table 4.2 shows that the practice of types of budget in the private hospitals. From the above table it is clear that 43% private hospitals practiced cash budgeting only, 29% practiced operational budgeting, 43% practiced master budgeting, 29% practiced flexible budgeting while zero base budgeting practiced by none.

**Table No. - 4.3**

**Budget Preparation System in the Private Hospitals**

<b>S.N.</b>	<b>Budget Preparation Division</b>	<b>No. of Sample</b>	<b>No. of Practioners</b>	<b>Percentage (%)</b>
1.	Budget Committee	7	2	29
2.	Planning and Development	7	3	43
3.	Finance Division	7	2	29
4.	Account Division	7	5	71

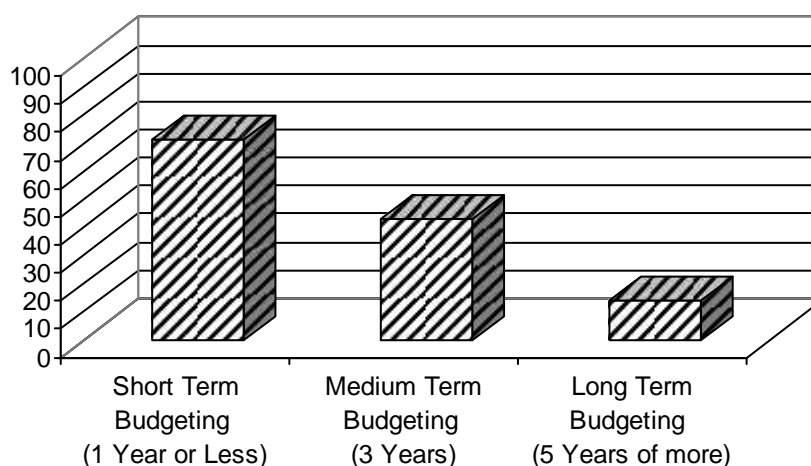


The above table 4.3 showed that budget preparation system in the private hospitals. From the table it is cleared that 29% used to prepare budget by Budget committee, 43% used to prepare budget by planning and development committee, 29% used to prepare budget by finance division and 71% used to prepare budget by account division.

**Table No. - 4.4**

**Types of Budget Practices in the Private Hospitals**

S.N.	Types of Budgets	No. of Sample	No. of Practitioners	Percentage (%)
1.	Short Term Budgeting (1 Year or Less)	7	5	71
2.	Medium Term Budgeting (3 Years)	7	3	43
3.	Long Term Budgeting (5 Years of more)	7	1	14



The above table 4.4 shows that the types of budget practice in the private hospitals. From the above table it is clear that, 71% practiced short term budget

(1 years of less), 43% practiced short term budgeting (3 years) and 14% practiced long term budget (5 years or more).

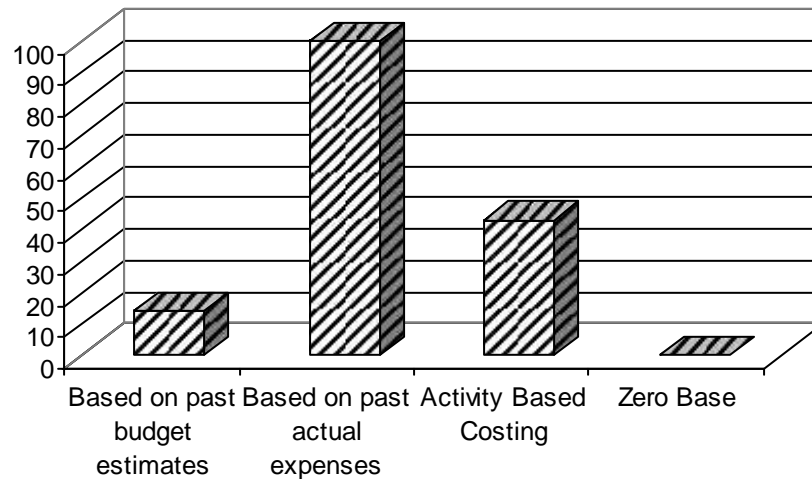
Most of the private hospitals were interested to prepare short term budget

(1 years of less) rather than medium term budgeting (3 Years) long term budgeting (5 years or more). The private hospitals were not interested in preparing long term budget because at one hand, it takes a long time and need a lot of exercises and cost. On another hand future is so uncertain that budget might not lead activity all the time. The analysis showed the private hospitals practiced long term budget without any foresight study. In some circumstance

budget need to be kept at bay and intuition as well as judgmental decision should be use to carryout the activities. So long term planning did not keep any meaning in business.

**Table No. - 4.5**  
**Base for Budget Preparation in the Private Hospitals**

S.N.	Base for Budget Preparation	No. of Sample	No. of Practioners	Percentage (%)
1.	Based on past budget estimates	7	1	14
2.	Based on past actual expenses	7	7	100
3.	Activity Based Costing	7	3	43
4.	Zero Base	7	0	0



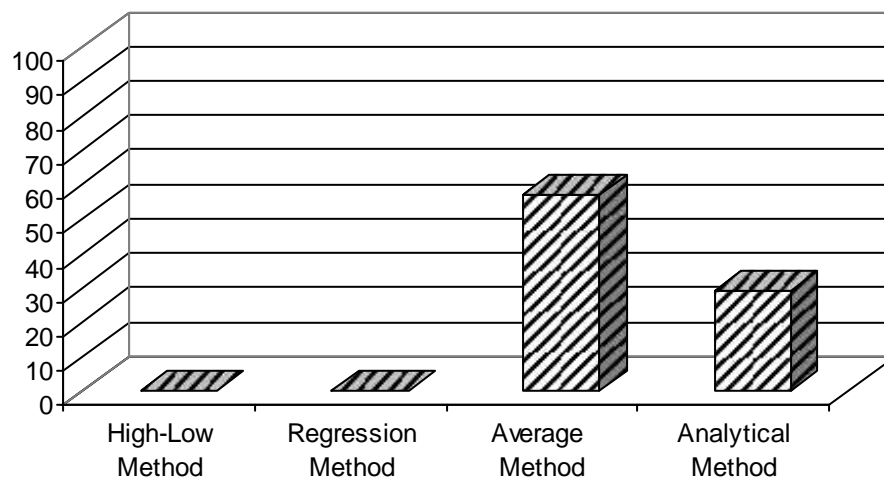
The above table 4.5 shows that the base for budget preparation in the private hospitals. From the above table it is clear that 14% practiced based on past estimation, 100% practiced based on actual expenses, 43% practiced activity based costing based while no. of practioner of zero base are almost not in practice.

The advance technique of budget preparation like zero base budgeting and activity based budget were not used because lack of expertise and willing to pay more expenses for it and having lack of information and techniques.



**Table No. - 4.6**  
**Methods of Segregating Mixed cost into Fixed Cost and Variable Cost in**  
**Private Hospitals**

S.N.	Method of Segregation	No. of Sample	No. of Practioners	Percentage (%)
1.	High-Low Method	7	0	0
2.	Regression Method	7	0	0
3.	Average Method	7	4	57
4.	Analytical Method	7	2	29



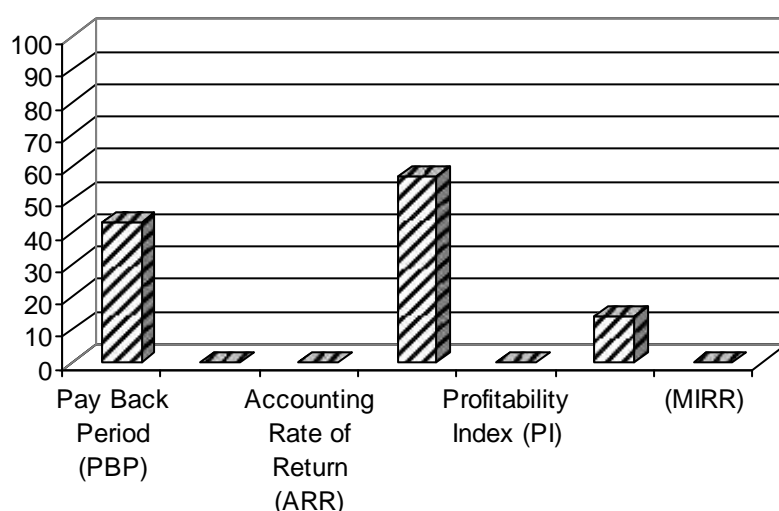
The above table 4.6 showed that the practice of segregating mixed cost into fixed cost and variable in public private hospitals of Nepal. The above table showed that 57% practiced average method and 29% practiced analytical method. High-low method and regression method practiced are almost not in practice.

Most of the hospitals practiced average method and analytical method because it is very easy to compute and advance method like high low method and regression method is not widely used in the private hospitals. The main reason of less using those methods is having lack of expert. In other hand regression method is statistical method which is difficult in application and it requires expert manpower in statistical methodology. Hospitals were not able to hire them.

**Table No. - 4.7**

**Practice of Capital Budgeting Tools in Purchasing Fixed or Making Long Term Investment in the Private Hospitals**

S.N.	Tools	No. of Sample	No. of Practioners	Percentage (%)
1.	Pay Back Period (PBP)	7	3	43
2.	Discount Pay Back Period	7	0	0
3.	Accounting Rate of Return (ARR)	7	0	0
4.	Net Present Value (NPV)	7	4	57
5.	Profitability Index (PI)	7	0	0
6.	Internal Rate of Return (IRR)	7	1	14
7.	(MIRR)	7	0	0



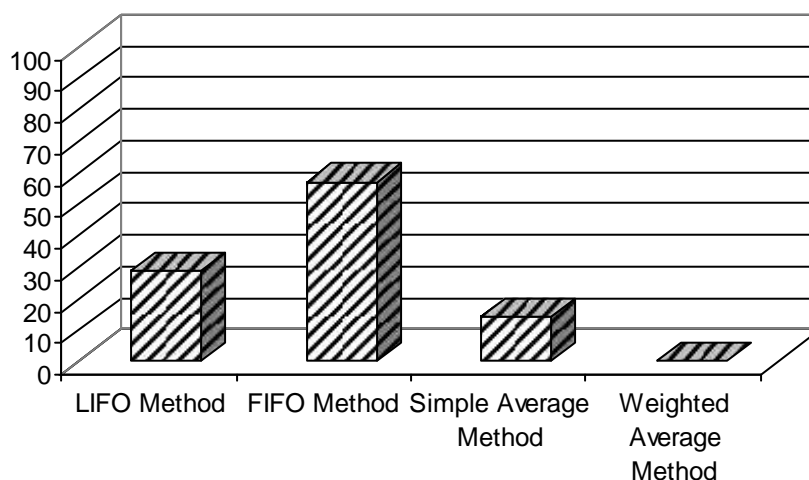
The above table 4.7 the present practice of capital budgeting tools in the Nepalese private hospitals. From above table it is obvious that 57% practiced net present value (NPV) criteria of capital budgeting, PBP tool was used by 43%, IRR tool was used by 14% to make long term investment decision. Here, long term signifies to the period of more than 1 year. Where discount pay back period, accounting rate of return, profitability index and (MIRR) were not used for capital budgeting in private hospitals.

From the above table it was obvious that NPV and PBP and IRR are highly practiced tools in private hospitals.

**Table No. - 4.8**

**Issuing Inventory (Stock) Practices in the Private Hospitals**

S.N.	Tools	No. of Sample	No. of Practioners	Percentage (%)
1.	LIFO Method	7	2	29
2.	FIFO Method	7	4	57
3.	Simple Average Method	7	1	14
4.	Weighted Average Method	7	0	0

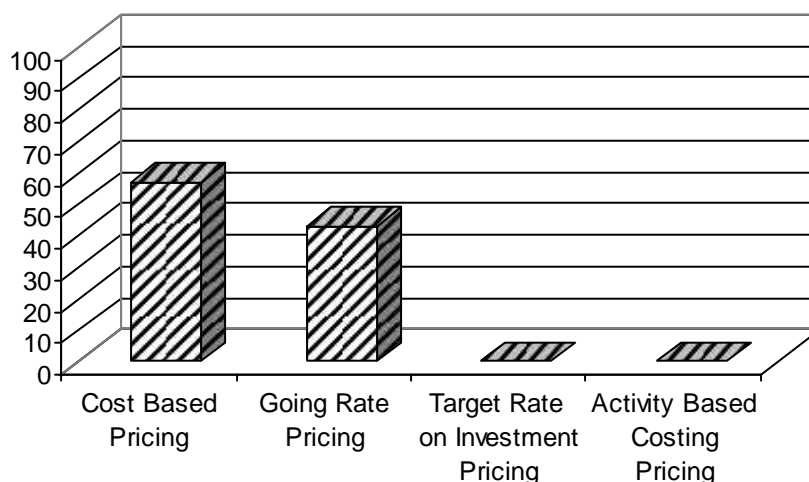


The above table 4.8 the present practice of issuing inventory (stock) tools in the Nepalese private hospitals. From above table it is obvious that 29% practiced LIFO method, 57% practiced FIFO method, 14% practiced simple average method and weighted average method was not used by private hospitals.

**Table No. - 4.9**

**Practices for Pricing Product and Services in the Private Hospitals**

S.N.	Tools	No. of Sample	No. of Practioners	Percentage (%)
1.	Cost Based Pricing	7	4	57
2.	Going Rate Pricing	7	3	43
3.	Target Rate on Investment Pricing	7	0	0
4.	Activity Based Costing Pricing	7	0	0



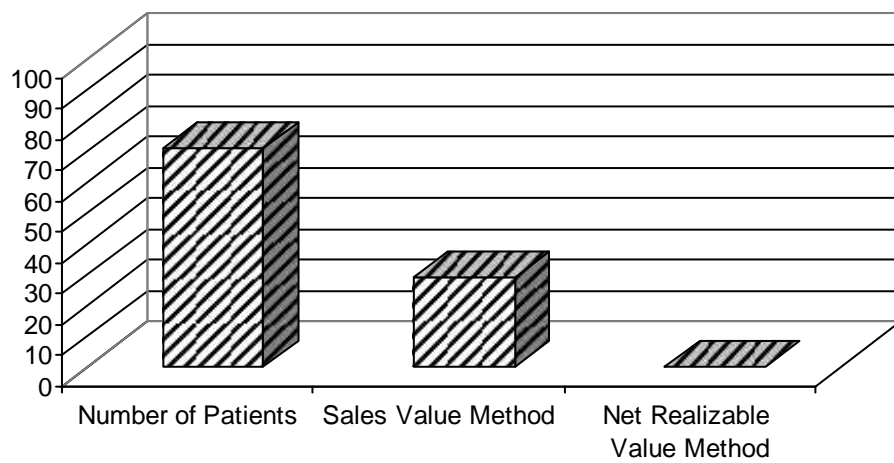
The above table 4.9 shows that the pricing practiced in the private hospitals. From the above table it showed that 57% practiced cost based pricing, 43% practiced going rate pricing, and not used by public private hospitals tools were target return on investment pricing activity based cost pricing.

The widely used method for pricing product and services in the private hospitals was "cost based pricing" and "going rate pricing". Activity based costing pricing and target rate on investment pricing were not practiced properly due to lack of knowledge, information and experts.

**Table No. - 4.10**

**Joint Cost Allocation in the Public Private hospitals**

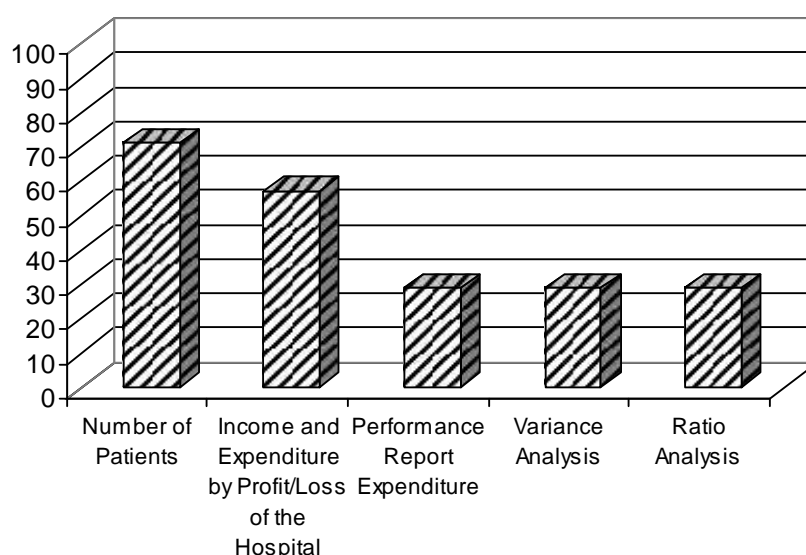
<b>S.N.</b>	<b>Tools</b>	<b>No. of Sample</b>	<b>No. of Practioner</b>	<b>Percentage (%)</b>
1.	Number of Patients	7	5	71
2.	Sales Value Method	7	2	29
3.	Net Realizable Value Method	7	0	0



The above table 4.10 shows the joint cost allocation in the private hospitals of Nepal. From the table it is clear that 71% practiced number of patients, 29% practiced sales value method and not practiced net realizable value method.

**Table No. - 4.11**  
**Tools Practiced in the Public Private hospitals for Measuring and Controlling the Overall performance**

S.N.	Tools	No. of Sample	No. of Practioners	Percentage (%)
1.	Number of Patients	7	5	71
2.	Income and Expenditure by Profit/Loss of the Hospital	7	4	57
3.	Performance Report Expenditure	7	2	29
4.	Variance Analysis	7	2	29
5.	Ratio Analysis	7	2	29



The above table 4.11 showed that the tools practiced in private hospitals of Nepal for measuring and controlling the overall performance. From the above table it is cleared that 71% practiced Number of Patients for measuring and controlling the overall performance, while 57% practiced income and expenditure by profit/loss of the hospital, and performance report expenditure, variance analysis and ratio analysis each practiced 29% in private hospitals. Number of patients made by the private hospitals has highly practiced. It is the major criteria to measure their performance.

### 4.3 Major Findings

On the basis of comprehensive analysis of the data, the following findings can be drawn:

1. Most of the private hospitals practiced “CVP”, "Annual Budgeting", “Cash flow”, “Ratio analysis”, “Variable Costing” for planning and controlling and decision making. 71% of private hospitals practiced CVP, 100% of the private hospitals practiced Cash Flows, 71% of the private hospitals practiced Ratio Analysis, 71% of the private hospitals practiced Annual Budget for planning, controlling and Decision Making.
2. Almost all the private hospitals practiced “Master Budget” and "Cash Budget" respectively. Almost 43% of the private hospitals practiced “Master Budget” and 43% of the private hospitals practiced “Cash Budget” respectively. That means “Master Budget” and Cash Budget were highly practiced in private hospitals rather than “Flexible Budget” and “Operational Budget”. There were 29% of such private hospitals who prepared both “Flexible” and “Operational Budget”. While none of private hospitals practiced the "Zero Base Budget".
3. It was found that in most of the private hospitals, it was the account committee that prepared the budget. Almost in 71% of the private hospitals, “Account Committee” prepared the budget while in 43% of the private hospitals “Planning and Department” prepared the budget and in 29% of the private hospitals, “Finance Division” and "Budget Committee" prepared the budget.
4. Almost the private hospitals practiced “Short Term Budget” (1 years or less). 71% of the private hospitals practiced “Short Term Budget” (1 years or less) and 43% of the private hospitals practiced “Medium Term Budget” (3 years) while preparing “Long Term Budget” (5years or more) was very low. The main reasons behind this were lack of information and expert to forecast. It takes a lot of time and money
5. Most of the private hospitals prepared its budget on the basis of “Actual Past Expenses”. Almost 100% of the private hospitals practiced budget

on the basis of “Actual Past Expenses”, 43% of the private hospitals practiced budget on the basis of “Activity Based Costing”. The advance tool like “Zero Base Budgeting” was not practiced in the private hospitals. The main reason of not practicing such tools are lack of information, lack of expert, lack of willing to train the employee and cognizance about the format and the way to developing it.

6. The technique of “Regression method” was not practiced by private hospitals to segregate mixed cost into fixed and variable cost. It was because lack of information and expert. Regression method is statistical method which is difficult in application and it requires expert manpower. Only "Average Method" and "Analytical Method" were practiced by 57% and 43% respectively. "High Low Method" was not practiced by private hospitals.
7. For cost and revenue estimation, almost all the private hospitals practiced “Past Trend analysis” forecast coming year cost and revenue. Out of the total private hospitals, 100% of the private hospitals practiced “Past Trend analysis”. “Market Survey” and “Arbitrary” to forecast coming year cost and revenue were almost not in practiced.
8. 57% of the private hospitals practiced “Net Present Value” and 43% of the private hospitals practiced “Pay Back Period”. Capital budgeting tools in purchasing fixed assets or long term investment decision.
9. 57% of the private hospitals practiced “FIFO” and 29% of the private hospitals practiced “LIFO”.
10. Out of total private hospitals, 57% of the private hospitals followed “Cost Based Pricing”, and “Going Rate” practiced by 43%.
11. Regarding joint cost allocation, it was found that out of total private hospitals 71% of the private hospitals practiced “Number of Patients” method to allocate the joint cost. 29% of the private hospitals practiced “Sales Value Method”.



12. There was no practice of taking consultancy services. Hiring outside expert were almost nil for preparation of budget. It was too expensive to hire outside expert.
13. For the measurement of overall performance in the private hospitals, most of the private hospitals practiced "Number of Patients" and "Profit and Loss" criteria, 71% of the private hospitals measured their performance on the basis of "Number of Patients" made by the private hospitals during the year. 57% of the total private hospitals practiced "Profit and Loss" to measure their performance. In other hand, practiced of "Performance Report", "Variable Analysis" and "Ratio Analysis" were practiced 29% each respectively.
14. From the analysis, it is found that the major difficulties for application of new advance management accounting tools are respectively:
  - Lack of information
  - Lack of skilled manpower
  - Lack of cognizance about the tools
  - Lack of willing to hire outsider expert and
  - Lack of communication

# **CHAPTER - 5**

## **SUMMARY, CONCLUSION AND RECOMMENDATION**

### **5.1 Summary**

Environment is a factor which makes trouble to organizational activities. It creates uncertain and risk. To minimizing the existing risk and creates a certainty in the organization, management is essential. Proper utilization of the management accounting tools, helps to achieve organizational.

Corporate form of organization play a very significant role in the economy activities of every country. Every organization in force their activities with limited resources. Management helps to utilize them in the best way. To utilize the limited resources in the best way, different tools and techniques are required to be applied. The main objectives of management accounting are to help manager 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 objectives of the present research were to examine the present practice of management accounting tools in the private hospitals of Nepal and to identify the area where management accounting tools can be applied to strengthen the private hospitals performance.

As per the nature of the study, survey type research design was followed with descriptive and analytical approach. Surveys of the different private hospitals were made. Questionnaires were distributed and discussions were made to gather information. Information was tabulated as per the requirement of the study.

From the analysis, it is found that management accounting tools such as CVP, Annual Budgeting, Cash flows and Ratio Analysis were widely practiced by the private hospitals, where as practice of the tools like Zero Base Budgeting, Activity Based Budgeting, Activity Based Costing, Target Costing and Value Engineering were almost nil in the private hospitals. Lack of the

information, skilled manpower and extra cost burden were the main reasons behind not practicing such tools.

## **5.2 Conclusion**

It was found that there was still gap between the theory and practical because most of the accounting tools were not applied in the private hospitals which were taught in the collages. Tools like, CVP, Annual Budgeting, Cash flows and Ratio Analysis were in practice but application of new tools, Zero Based Budgeting, Activity Based Budgeting, Activity Based Costing, Target Costing and Value Engineering are not in practice.

In Nepalese private hospitals, practiced hiring outside expert for carrying out different activities are almost nil. Thus it can be said that private hospitals were infant stage in practicing of management accounting tools although they were operating from long time.

To practice of new management accounting tools, hiring of outside expert will be good idea but no the private hospitals used management accounting expert because of cost burden. They are with the concept that management accounting is similar to financial accounting. New tools and techniques such as; Zero Base Budgeting, Activity Based Budgeting, Activity Based Costing, Target Costing and Value Engineering, developed around the global but practice of it is almost nil in Nepalese private hospitals. Lack of information and cognizance about management accounting tools are the main factors causing problem in the application of such tools.

## **5.3 Recommendations**

Nepal is a member of "World Trade Organization" since 2004 April 23. As Nepal is processing towards the globalization through the "World Trade Organization" and trying to get success in competitive advantage in international market as well as national market with Multinational Corporation. Nepalese private hospitals should fit with global environment. Best fit managerial strategic should be developed for that. Managers should think in a global perspective. Information should be updated for better utilization of the

limited resources and achieving goals through cut throat competition, application of advance management accounting tools should be applied. Thus the following recommendations based on the finding of the research study were:

- Environment is very critical factor effecting to operate the private hospitals activities. 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. If the private hospitals cannot hire the outside expert, it can send its existing employee for short term training. If this also is not feasible for them, they can manage it by taking services of fee based consultant.
- Private hospitals activities should not overly depends upon the traditional tools of management accounting, such as past trend analysis for the smooth operation of the activities. They should be motivated towards the application of new advance and modern management accounting tools such as Target costing, Activity Based Cost and Zero Based Budgeting.
- While preparing budgeting and planning activities, private hospitals 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.
- Private hospitals completely depends on "Profit and loss made by private hospitals" criteria to measure the performance are suggested not to rely completely on these criteria. Along with these criteria, private hospitals are suggested to follow criteria such as, Activity, Liquidity, Productivity and Variance analysis. Beside these, present performance of the private hospitals should be compared with past performance of the private hospitals.

- Private hospitals should practice allocation of joint cost among the departments, divisions and units so that cost consumption rate per divisions, departments unit can be ascertained which helps in decision-making regarding cost proper allocation of joint cost is a must in every private hospitals.
- While estimating cost and revenue for future period, private hospitals 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 Budgeting", "Market survey" and "statistical tools" should be practiced. This helps the private hospitals to reach to correct estimation.
- Private hospitals using "Cost plus pricing" should use target cost, activity based cost and managerial cost pricing tools as per the case.
- Nepalese private hospitals should be updated with new tools that are practiced around the global in best performance private hospitals. For cost reduction, life cycle costing, target costing, value engineering, process reengineering, 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 through 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 customers.
- Effective law and regulations should be implemented to develop the performance of the private hospitals by government.
- Political stability must exist forever for the performance of private hospitals.
- The private hospitals should spend certain percentage of their earning in research and developing program so that new tools and techniques can be developed and adopted in the private hospitals.
- It is suggested to practice those tools in the private hospitals for improving the performance of private hospitals. But beside that

recommendation, during the research period, I had found some weakness in private hospitals and also less contribution of government in private hospitals.

- Morality concept should be developed because in private hospitals, there were a corruption, irregularity and irresponsibility towards in their duties. Private hospitals should make strong law and regulation to make well discipline to the staff and implement them strongly.
- Private hospitals should monitoring the performance of the staff and have a good evaluation of their contribution to rewards them.
- Various programs should be launched for the motivation of the staff.
- Private hospitals should have the knowledge about their opportunities, threats, strengths and weaknesses so that gain out of competitors activities could be made.

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# APPENDIX I

## QUESTIONNAIRE

Name: .....

Post: .....

Name of Hospital: .....

Number of Bed: .....

Year of Establishment: .....

Service available: .....

1. Which of the following management accounting tools are you used in Hospital?

Management Accounting Tools	YES	NO
Cost-volume profit analysis (Break even analysis)		
Long term budgeting		
Annual budgeting		
Capital budgeting		
Ratio analysis		
Cash flow statement		
Activity based costing		
Standard costing (Costing portion)		
Variable costing (Costing portion)		

2. If your Hospital is not used any management accounting tool, what may be the reasons?

- a) Lack of Skill manpower.
- b) Lack of information.
- c) Lack of policy (internal/external)
- d) High cost
- e) Other (If any) .....

.....

3. What type of the budgeting is used in your Hospital?
  - a) Cash budget
  - b) Operational budget
  - c) Master budget
  - d) Flexible budget
  - e) Zero base budget
  - f) Other (If any) .....
  - .....
  - .....
  
4. Who prepares the budget in your Hospital?
  - a) Budget commit
  - b) Planning and development division
  - c) Finance division
  - d) Account division
  - e) Experts
  - f) Other (If any) .....
  - .....
  
5. What types of budget does the Hospital use?
  - a) Short term
  - b) Medium term
  - c) Long term
  - d) Other (If any) .....
  - .....
  
6. On what basis, does your Hospital prepare budget?
  - a) Based on past budget estimates.
  - b) Based on past actual expenses
  - c) Activity based
  - d) Zero base
  - e) Other (If any) .....
  - .....

7. Which technique does your Hospital use to segregate the mixed cost into Variable and Fixed?
- a) High-low method
  - b) Regression method
  - c) Average method
  - d) Analytical method
  - e) Other (If any) .....
8. What technique does the Hospital use for cost and revenue estimation?
- a) Past trend analysis
  - b) Zero-base budgeting
  - c) Market survey
  - d) Arbitrary basis
  - e) Other (If any) .....
9. Which capital budgeting tools are used while purchasing fixed assets?
- a) Pay Back Period (PBP)
  - b) Discounted Pay Back Period
  - c) Accounting Rate of Return (ARR)
  - d) Net Present Value (NPV)
  - e) Profitability Index (PI)
  - f) Internal Rate of Return (IRR)
  - g) (MIRR)
  - h) Other (If any) .....
10. Which pricing method is used in issuing inventory (stock) in your Hospital?
- a) LIFO method
  - b) FIFO method
  - c) Simple average method
  - d) Weighted average method



- e) Other (If any) .....
- .....
- 11. What technique does the Hospital practice for pricing product4?
  - a) Cost based pricing
  - b) Going rate pricing
  - c) Target rate on investment pricing
  - d) Activity based costing pricing
  - e) Other (If any) .....
  - .....
- 12. What techniques does your Hospital follow to allocate join cost?
  - a) Number of patients
  - b) Sales value method
  - c) Net realizable value method
  - d) Other (If any) .....
  - .....
- 13. How does your Hospital measure the overall performance at the end of the year?
  - a) Number of patient treated
  - b) Incomes and expenses shown by P/L of the Hospital
  - c) Performance report expenditure
  - d) Variance analysis
  - e) Ratio analysis
  - f) Other (If any) .....
  - .....

## APPENDIX II

### TABULATION OF QUESTIONNAIRE

Hospital Name	Post	Number of Bed	Establish Year
Alka Hospital Pvt. Ltd.	Manager	55	2063
Shahid Memorial Hospital	Account	100	2064
Kathmandu Model Hospital	Account	125	1993
Jana Unitylife Hospital	Account	25	2063
B & B Hospital Pvt. Ltd.	Account	135	2054
HRDC	Account	70	1992
No Name	Account	50	2061

1. Which of the following management accounting tools are you used in Hospital?

	CVP Analysis (BEP)		Long Term Budgeting		Annual Budgeting		Capital Budgeting		Ratio Analysis		Cash Flow Statement		Activity Based Costing		Standard Costing (Cost Portion)		Variable Costing (Costing Portion)	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.	Y										Y		Y		Y		Y	
Shahid Memorial Hospital	Y		Y		Y		Y		Y		Y		Y		Y		Y	
Kathmandu Model Hospital	Y				Y		Y		Y		Y				Y		Y	
Jana Unitylife Hospital			Y		Y				Y		Y							
B & B Hospital Pvt. Ltd.	Y		Y		Y		Y		Y		Y		Y				Y	
HRDC					Y				Y		Y							
No Name	Y				Y				Y		Y						Y	

3. What type of the budgeting is used in your Hospital?

	Cash Budgeting		Operation Budgeting		Master Budgeting		Flexible Budgeting		Zero Base Budget	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.					Y					
Shahid Memorial Hospital					Y					
Kathmandu Model Hospital			Y							
Jana Unitylife Hospital	Y						Y			
B & B Hospital Pvt. Ltd.	Y		Y							
HRDC							Y			
No Name	Y				Y					

4. Who prepares the budgeting in your Hospital?

	Budget Commit		Planning and Development Division		Finance Division		Account Division		Experts	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.			Y		Y		Y			
Shahid Memorial Hospital			Y							
Kathmandu Model Hospital	Y						Y			
Jana Unitylife Hospital							Y			
B & B Hospital Pvt. Ltd.	Y									
HRDC			Y		Y		Y			
No Name							Y			

5. What type of budget does the Hospital use?

	Short Term		Medium Term		Long Term	
	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.			Y			
Shahid Memorial Hospital	Y					
Kathmandu Model Hospital	Y					
Jana Unitylife Hospital			Y			
B & B Hospital Pvt. Ltd.	Y		Y		Y	
HRDC	Y					
No Name	Y					

6. On what basis, does your hospital prepare budget?

	Past Estimates		Past Actual Expense		Activity Based		Zero Base	
	Yes	No	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.			Y		Y			
Shahid Memorial Hospital			Y					
Kathmandu Model Hospital			Y		Y			
Jana Unitylife Hospital			Y					
B & B Hospital Pvt. Ltd.	Y		Y		Y			
HRDC			Y					
No Name			Y					

7. Which technique does your hospital use to segregate the mixed cost into variable and Fixed?

	High Low Method		Regression Method		Average Method		Analytical Method	
	Yes	No	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.							Y	
Shahid Memorial Hospital					Y			
Kathmandu Model Hospital					Y		Y	
Jana Unitylife Hospital					Y			
B & B Hospital Pvt. Ltd.							Y	
HRDC								
No Name					Y			

8. What technique does the hospital use for cost and revenue estimation?

	Past Trend Analysis		Market Survey		Arbitrary Basis	
	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.	Y					
Shahid Memorial Hospital	Y					
Kathmandu Model Hospital	Y					
Jana Unitylife Hospital	Y					
B & B Hospital Pvt. Ltd.	Y					
HRDC	Y					
No Name	Y					

9. Which capital budgeting tools are used while purchasing fixed assets?

	(PBP)		Discounted PBP		(ARR)		(NPV)		(PI)		(IRR)		(MIRR)	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.											Y			
Shahid Memorial Hospital							Y							
Kathmandu Model Hospital							Y							
Jana Unitylife Hospital	Y													
B & B Hospital Pvt. Ltd.	Y						Y							
HRDC														
No Name	Y						Y							

10. Which pricing method is used in issuing inventory (Stock) in your hospital?

	LIFO Method		FIFO Method		Simple Average Method		Weighted Average Method	
	Yes	No	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.					Y			
Shahid Memorial Hospital				Y				
Kathmandu Model Hospital				Y				
Jana Unitylife Hospital				Y				
B & B Hospital Pvt. Ltd.				Y				
HRDC	Y							
No Name	Y							

11. What technique does the hospital practice for pricing product?

	Cost Based Pricing		Going Rate		Target Rate Investment Pricing		ABC Pricing	
	Yes	No	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.			Y					
Shahid Memorial Hospital	Y							
Kathmandu Model Hospital	Y							
Jana Unitylife Hospital			Y					
B & B Hospital Pvt. Ltd.	Y							
HRDC	Y							
No Name			Y					

12. What techniques does your hospital follow to allocate joint cost?

	Number of Patients		Sales Value Method		Net Realizable Value Method	
	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.			Y			
Shahid Memorial Hospital			Y			
Kathmandu Model Hospital	Y					
Jana Unitylife Hospital	Y					
B & B Hospital Pvt. Ltd.	Y					
HRDC	Y					
No Name	Y					

13. How does your hospital measure the overall performance at the end of the year?

	Number of Patients		I & E Shown by P/L of the Hospital		Performance Report Expenditure		Variable Analysis		Ratio Analysis	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Alka Hospital Pvt. Ltd.			Y							
Shahid Memorial Hospital			Y							
Kathmandu Model Hospital	Y				Y		Y			
Jana Unitylife Hospital	Y									
B & B Hospital Pvt. Ltd.	Y		Y		Y		Y		Y	
HRDC	Y									
No Name	Y		Y						Y	