

# CHAPTER-I

## INTRODUCTION

### 1.1 Background of the Study

Nepal is a small landlocked country situated between China and India. These two large countries have huge and rapid growth in business, industrial and economic sector, but Nepal has been creeping and trying to develop its economy slowly. Now, Nepal is declaration federal republic of democracy and peace process is running upon the completion of constitution assembly election. It has 0.03% and 0.3% total area of World and Asia respectively. It has the total area of 147,181 square kilometers having average of 885 km from east to west and average width of 193 km. from north to south. It is located between the latitude of 26<sup>0</sup>22" north to 30<sup>0</sup>27" north and longitude of 80<sup>0</sup>04" east to 88<sup>0</sup>12" east. Its population has been estimated to be 2.5 crores. The geographical structure is very complex. Geographically Nepal is divided into three regions. The Himalayan region stands in the heights of 4877 to 8844 meters above sea level; about 15% area of the country is in two regions. The mountainous region stands in the middle part of country. This region stands in the height of 600 to 4887 meters from sea level. This region covers about 68% area of the country. The Terai region has plain land. This region stands in the height of 68 to 600 meters from sea level and its total area is about 17% of the nation. The most fertile land and dense forest are found in this region. ([www.npc.gov.np](http://www.npc.gov.np))

The economic structure of Nepal is mixed economy i.e. socialist and capitalist. However, Nepal is an agricultural country where more than 80% of the total production is dependent on agricultural sector. Agricultural is the backbone of country as it is the main sources of employment. Nepal is a developing country with per capita income of about US \$ 220. An estimated 38% of population lives below the poverty line. Income distribution is highly skewed. The economy is agro-oriented with widespread subsistence pockets. Nepal became a member of WTO since 2004. So, it has been coming challenges a kind of opportunity for economic growth.

The country becomes economic prosperity when the available resources are full utilized by corporate firms. Corporate firms are public and private. Public firms/enterprises are established to provide different kind of service to the people. They are established as semi-autonomous or autonomous bodies. They produce and supply large varieties of goods and services for the public at reasonable prices. They are established for good governance as well as development of the country. Nepalese public enterprises can be taken as one form of organization of the Nepalese industrialization. They are operating to growing economic activities as well as distributing its goods and services to people to all regions of the nation.

Each and every organization has certain objective which is achieved through management process. Management process is managerial adjustment of various activities which consists planning, controlling and decision making process.

## **1.2 Public Enterprises**

### **1.2.1 Historical Background**

All business activities were left to the private sector till the 19<sup>th</sup> century. But they were exploiting workers and consumers in order to maximize profits. They did not pay attention to public needs, the welfare of the society, the establishment of basic and/or heavy industries, balanced development of the country etc. Some of them resorted to malpractices in business such as hoarding, black marketing, profiteering. All these activities made the government realize its responsibilities towards the people. Therefore, the government began interfering in trade and commerce to check such malpractices and ensure the welfare of the society (Sharma, Fago & Dahal, 2002:132)

"Public enterprises have been considered as a key operational instrument to achieve the twin ideas of economic planning and development. Planned economy is the method evolved by the socialist for achieving rapid economic development. An important part of the socialist doctrine is the ownership of means of production and distribution by the state. Thus ownership of poverty has remained the main plank of socialist thought." (Mathur, 1999:1) "Considerable controversy has surrounded the doctrine of state's ownership of means of production and distribution. While social scientists and political thinkers have been debating for centuries whether there should be a 'socialist' or 'Capitalist' path for economic development. Very little attention has been given to the organizational, institutional and managerial arrangements if the state were to take over the direct running of institutional enterprises. It was only gradually

that the idea of an autonomous institution for managing state enterprises emerged" [Mathur, 1999:16]

In Nepal, public enterprises were established in order to prepare infrastructure service, to produce the required goods in the country and to export, to create opportunities for employment, to increase government revenues and to contribute significantly in the national development as well as to assist in the country's economic advancement.

When Nepal was opening up to the world, the private sector had neither the capital nor the technical and managerial skills to establish new industries, especially in areas where they were designed for import substitution. The cement, sugar, cotton and cigarette industries helped a lot in import substitution. Nepal's three cement industries fulfilled over 80% of internal demand. The two sugar factories supplied over 50% of market requirement and the nation had attained self-sufficiency in cigarettes.

The history of public enterprises in Nepal is marked first by expansion and then by contraction. Till the early eighties, public enterprises sector expanded in the country. This had to do with easy availability of foreign aid, lack of private sector development and finally, the prevailing economic of state intervention. However, widespread poor performance of the public enterprises sector led the government to rethink the need to establish and run public enterprise.

PE's have a nearly half-century-long history in Nepal. The first one emerged in 1938 with the partial nationalization of Nepal Bank Ltd. The first commercial bank in the name of Nepal Bank Ltd. was established in the private sector in 1985 under the commercial Bank act 1974 and companies Act 1965. There has been a rapid growth in the number of PE's after 1956. The number crossed the 60 mark in 1989/90, including 51 non-financial and nine financial enterprises. Most of the country's PE's were built as turnkey projects under bilateral agreements and with the help of international donors.

In Nepal, the public enterprises were established in public service, industry, trade, finance and other sector to create the infrastructure for basic services, and also because the private sector was seen as inefficient in important areas, the capital investment capability was low, and because technical know how development was till in a very primary stage. After Nepal Bank Limited was established in 1938 as a public enterprise, other such enterprises like Nepal Industrial Development Corporation and Royal Nepal Airlines Corporation also came into being. In the industrial sector also, industries like the Janakpur cigarette Factory, Birgunj sugar Mill, and Bansbari

leather shoe Factory were established in 1961. Subsequently, banks, business sector, telecommunication, electricity and water supply in the services sector, cement, bricks, medicines and textiles in the industrial sector came into existence. In this way, at present sixty-two different public enterprises were established in Nepal. Although the development of public enterprises has achieved the above-mentioned aims by creating employment opportunities, increasing production in the country and providing the important basic services, the enterprises have not been functioning in an efficient manner. Despite the long-term protection given to these public enterprises, they have not been able to achieve financial capability and work efficiency and are still dependent upon government grants. So in order to enhance their efficiency it has become necessary to think seriously about them.

Public enterprises have become important instruments in nation-building to carry out entrepreneurial functions associated with economic and social development. To some extent, PE's have assumed a part role of the state in accelerating economic development and maintaining political stability where sole dependence upon ministerial departments to implement government programmes has proved to be ineffective.

### **1.2.2 Meaning and Definitions of PEs**

Public Enterprises are called by a variety of names, such as public undertakings, state enterprises, nationalized industries, governmental undertakings, etc. They are commercial or public utility undertakings that are funded by government. A public enterprise may be defined as business enterprises that are in complete control and management of the government or those undertakings whose more than half of the shares are owned by the government. Public enterprises include any enterprises working under public ownership functioning under a corporate form. It includes all the industrial and commercial activities of the government. The best aim of public enterprise is to provide goods and services to the public at a reasonable rate through profit earning are not excluded but their primary objective is social service. [Shrestha, 2006: 141-142]

Public enterprise is an important form of business organization which is financed, controlled and operated by government. In such enterprises either the govt is the sole owner of the business or majority of the shares are owned by the government. A public enterprise is that sphere of business activity where government ownership and control is absolute. It is a business organization which is run, managed and controlled

by the government on behalf of the public at large. The government's investments in such enterprises are at least 51 percent. PEs is established to provide different kind of service to the people. Public enterprises are also known as state enterprise, nationalized industries, public sector undertaking etc. They are established as semi-autonomous or autonomous bodies. They produce and supply large varieties of goods and services for the public at reasonable prices. [Sharma, Fago & Dahal, 2002:132]

According to A. H. Henson, "Public enterprises mean state ownership and operation of industrial, agriculture, financial and commercial undertakings." Similarly in the words of M. N Malya, "Public enterprises are autonomous or semi-autonomous corporations and companies established owned and controlled by the state and engaged in industrial and commercial activity." [Shrestha, 2006:141]

"State owned enterprises are finally autonomous and legally distinct entities wholly or partly owned by central or sub-national governments." [World Bank Report – 1988]

"Public enterprises are autonomous bodies which are owned and managed by the government and which provide goods and services for a price. The ownership with the government should be 51% or more to make an entity public enterprise." [Narayan, 1998:42]

### **1.2.3 Importance of PEs.**

The principles of "Welfare State" emphasizes the establishment of public enterprise. It creates a strong foundation for modern industrial economy and helps the country in achieving self-sufficiency in industry and technical know-how. The importances for establishing public enterprises are as follows. [Shrestha, 2006:142-144]

- i. **Planned Development:** Public enterprises aim at the economic development of the country in a planned way and in accordance with the policies of the government. Appropriate progress cannot be made by the private sector industries only. The private sector neglects the industries with long gestation period and low rate of returns. Generally, they want maximum profits very soon. Thus, public enterprises provide planned development by setting up industries that are economically unattractive but nationally essential for the public.
- ii. **Balanced Development:** The economic development has take place in a planned way as well as in a balance way. Balance development requires decentralization of industries.

- iii. Accelerating the Rate of Economic Growth:** In developing countries accelerating the rate of economic growth gets the first priority. Hence, these enterprises try to remove the basic deficiencies of the economy and provide all infrastructures for economic growth.
- iv. Provision of Public Utilities:** The nature of the public utility concern requires huge fixed capital investment and profit margin is low. So, private company cannot afford to make such huge investment.
- v. Supply of Essential Products or Services:** PEs is essential for supplying essential goods and services sufficiently at reasonable price to the people.
- vi. Employment Opportunities:** The government is responsible for providing employment opportunities to its citizens.
- vii. Reducing Economic Inequalities:** PEs are meant to remove economic inequalities. Due to private entrepreneur wealth and income concentrates in few industrialists. By establishing PEs, there is possibility for the govt. to reduce inequalities of wealth and income among the people.
- viii. Establishment of Welfare–Oriented Society:** PEs helps to establish welfare oriented society. Private company work for increasing profit but PEs does not work for making profit. Hence, adulteration, artificial scarcity, black marketing etc. are not done by PEs.

#### **1.2.4 Features of PEs**

It can be concluded that public enterprises are those businesses undertaking that are owned, managed and controlled by the government. These enterprise are set up with basic purpose of promote social welfare as well providing goods & services and public utility. The public enterprises consists some features which is listed as follows.

- i. Government ownership
- ii. Government control and management
- iii. Public accountability
- iv. Service motive
- v. Financing by the government
- vi. Autonomous functions
- vii. Monopoly enterprises
- viii. Separate legal entity
- ix. essential goods and services

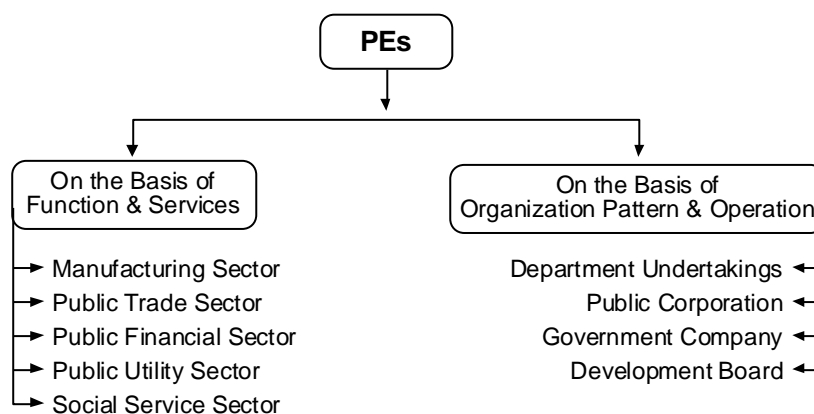
#### **1.2.5 Objectives of PEs**

The major objectives underlying establishing PE's were as follows.

1. To generate economic activities in the country as there was the absence of significant role – play by the private sector.
2. To available goods and service to general people at fair prices and good quality as well quantity
3. To create employment opportunities in the organized sector.
4. To substitute imports and save foreign exchange.
5. To develop economic and social infrastructure.

#### **1.2.6 Types of PEs in Nepal**

Government is the promoters of public enterprises. An analysis of the public enterprises in various countries shows that, there are two basis form classification of PEs i.e., (i) On the basis of function & Service (ii) On the basis of organization pattern and operation.



**Figure No. 1.1**

### 1.2.6.1 On the Basis of Function & Services

Public enterprises are five types on the basis of function and services. They are described as follows.

- 1) **Manufacturing Sector:** Those companies who produce goods for daily consumption purpose as well capital purpose are called manufacturing sector. For example, in Nepal; Lumbini sugar factory limited, Dairy development corporation, Hetauda Cement Industry Limited etc are manufacturing sector.
- 2) **Public Trade Sector:** Those companies who doesn't produce goods and only buy goods then sales those goods/products are called Trade sector. For example, in Nepal Food Corporation, Salt Trade Corporation Ltd. Agriculture Inputs Company Ltd, National Seeds Company Ltd. are public Trade sector.
- 3) **Public Financial Sector:** Those institutions that are concern to operate financial activities are called financial sector. For example, in Nepal; Nepal Bank Limited, Rastriya Banijya Bank, Rastriya Beema Sansthan etc. are public financial sector.
- 4) **Public Utility Sector:** Those sectors whose operating is directly related to people's utility is called public utility sector. In Nepal; Nepal Telecommunication Corporation. Nepal Electricity Authority and Nepal Water Supply Corporation are Public utility sectors.
- 5) **Social Services Sector:** Those sectors whose operating is directly related to social service is called social service sector. In Nepal; Gorkhapatra Corporation, Nepal Airlines Corporation, Radio Nepal, Nepal Television etc. are social service sector.



### 1.2.6.2 On the basis of organization pattern & Operation

Public enterprises are of four types based on organization pattern and operation. They are described as follows:

#### 1) **Departmental Undertakings:**

It is the oldest method of operating and managing the affairs of public enterprises. Under it, the undertaking is to be managed by a department of the government along with its other responsibilities. In other words, all business activities of the undertakings are conducted under the overall control of a minister concerned who is answerable regarding the affairs of the undertaking. It is under the overall and ultimate control of a minister who is responsible to the parliament. The Departments of postal service, the Department of Mines, The cultural undertakings, the Department of Defense Industries etc, are some examples of departmental undertakings in Nepal. The departmental undertakings have the following features. [Sharma, Fago & Dahal, 2002:134-135]

- Financing
- Management and control
- Rules & regulation
- Recruitment of employees
- No separate legal entity
- Public accountability

#### 2) **Public Corporation**

A public corporation is one of the most suitable forms of organization for managing public enterprises. A public corporation is a corporate body created by a special act of the parliament. Its power, duties, objectives, privileges and management are all defined by the Act. It is also known as statutory corporation. The main purpose of a public corporation is the maximization of Social welfare rather than profit. The Nepal Telecommunication Corporation, the Nepal Oil Corporation, the Electricity Authority etc. are some examples of public corporations in Nepal. Public Corporation is incorporated with a single purpose or with multiple purposes. Public corporations have the following features.

- Incorporated under special Act.
- Board of Directors
- Government Ownership

- Separate legal Entity
- Financial Autonomy
- Autonomy in operation
- Recruitment of employees are not civil service
- Public Accountability

### 3) **Government Company**

A public enterprise, which is established under the existing company act of the country, is known as Government Company. In such a company the government's stake is at least 51% of the total share Capital. No special act is required to form government companies. Their liability is limited but their management is completely in the hands of government. The National Trading Co. Ltd. the Nepal Rosin and Turpentine Co. Ltd, the Salt Trading Co. Ltd etc are some examples of government companies in Nepal. A Government company have some features are as follow.

- Incorporated under the company act.
- Created by Executive Decision
- Board of Directors
- Independent financial Management
- Recruitment of employees are not civil services
- Public Accountability

### 4) **Development Board**

PEs is also established in the form of Development Board. Sometimes, it will be necessary to contract different ministry, departments and other offices of govt for development work in Public welfare sector. Hence, Development Boards are established with the objective to operate public welfare developments works. The representatives from concerned ministry, department and other offices will be member in the Board. Hence, it can function quickly as it involves representatives from various concerned ministries, departments and other offices. Such Development Boards are established under Development Board Act, 2013. The examples of Development Boards are Radio Nepal Development Board, Trade promotion center, Security Board, Insurance Board, etc. [ Shrestha, 2006:152]

#### **1.2.7 Evolution of PEs in Nepal**

The establishment of PE's in Nepal was stated after the established of Nepal Bank Limited in 1938. The evolution of PE's is described as follows.

### **1. Pre-Plan Period**

Pre-plan period marks the period of almost non-existence of any government policy towards PE. Nepal Bank Ltd was the single PE established prior to the launching of the planned development policy in 1956. Therefore, virtually no development of PEs took place during the period. Nepalese economy was characterized by lack of basic infrastructure, support services, essential basic industries and so on. Illiteracy rate was quite high. Private Sector was also not developed. The country lacked resources both financial as well as non-financial including sufficient human resources comprising of entrepreneurs so necessary for the proper Socio-economic development of the country. [Shrestha, 1990:8]

### **2. The First Five Years Plan Period (1956–61)**

The plan adopted the principles of mixed economy utility industries were reserved for the public sector investment that promised 'greater public welfare' and which fails to attract private investment whereas industrial sector was left open to private sector with government support service if needed. Seven PE's were established during these periods which are Royal Nepal Airlines Corporation, Nepal Industrial Development Corporation, Raghupati Jute Mill, Timber Corporation, Balaju Yantra Shata (P.) Ltd. and Asahaya Kalyan Kendra

### **3. The Interim Period (1961-62)**

The period was marked by establishment of 3 PEs viz, Ratna Recording Corporation National trading Ltd and National Construction Company of Nepal. The period was also marked by the declaration of HMG policy as laid down in the industrial Enterprises Act of May 28, 1961, which adopted the PE on the same line and basis as per the first plan.

### **4. The Second Three Year Plan**

The second plan was launched in 1962, which laid greater emphasis on industrial development. The plan accorded priority to industries using domestic raw materials and with labour intensity, mining, export-oriented and import-substitution industries. Eleven PEs were established during that period Viz., Gorkhapatra Corporation, Nepal Electricity Corporation, National Commercial Bank, Birgunj Factory, Janakpur Cigarette Factory, Transport Corporation, Providend Fund, Hetauda Industrial District, Nepalese Carpet (P.) Ltd., Patan Industrial District and Fuel Corporation. The

plan stressed for the first time of the balanced regional development, the second plan also did not accomplish much success.

### **5. The Third Five Year Plan (1965-70)**

The third plan recognized industrial development as an essential component of economic growth and gave it third priority. The physical and financial targets were set for existing industries. The Plan gave priority to the industries using local materials, and processing, import-substitution and export-promoting industries. Basic industries like fertilizer and agricultural tools too got high consideration. Although twelve PE's were established during the period. Such as Bansbari leather and Shoe Factory, Agricultural input Corporation., Agricultural Development Bank, Agricultural Tools Factory Ltd. Nepal Telecommunication Corporation, Candeswari Textile Industry, Cottage Industry and Handicraft Emporium, Nepal Tea Development Corporation, Brick and Tiles Factory, Dairy development corporation, Himal Cement Company and National Insurance Corporation. The achievement of this plan was also for form satisfactory.

### **6. The fourth Five Year Plan (1970-75)**

The Fourth Plan indented to establish cement, paper and Fertilizer industries in the Public sector, in collaboration with nationals and foreigners. The industries allocated to the private sector were the ones using local raw materials and agro based, export-oriented forest-based and mineral based industries. However, 27 PEs were established during period such as; Nepal Oil Corporation, Hetauda Textile Industry and Credit Guarantee Corporation, Rastriya Chamel Factory, Tobacco Development Company, Jute Development and Trading Corporation, Cultural Corporation, Royal Nepal Film Corporation, Nepal livestock Company, Agricultural and lime Industry, Eastern Electricity Corporation, Electronic Data Processing Center and Eight Paddy Rice Export Companies etc.

### **7. The Fifth Plan Period (1975-80)**

The fifth Plan had the objective of providing employment to the surplus labour in agriculture through industrial development. It also envisaged the need for self-reliance on consumer goods of daily necessity and some construction materials. The private sector was again accorded high priority. The plan adopted the industrial policy of 1974 and provisioned for the established of industrial districts and four industrial ventures in the public sector, projecting a substantial districts were set up, only two industrial enterprise, one form the projected list and on other not envisaged in the plan

were set up during the period. It also marked as the period of review and reconciliation of PEs and put a question mark on their proliferations. Consequently, Corporation and Co-ordination committee under the chairmanship of the Prime Minister was established to study and recommend suitable measures for implementation. HMG adopted 'restraining policy' in the sixth five-year plan. However, few PEs came into establishment while some PEs were amalgamated and divested to private sector during the period. Some PEs like Hetauda Cement Factory and Janak Education Materials Centre were established during this period.

#### **8. The Sixth Five-Year Plan (1980-85)**

The sixth plan had set the same objectives as in previous plan such as transfer of surplus labour from agriculture to industry, self-reliance on consumer's goods and construction materials, creation of atmosphere conducive to more private sector investment, establishment of only the industries requiring sophisticated technology and the large investment in public sector. The plan intended to transfer even some appropriate industries to the private sector. It was, in fact, the first time that the government was thinking of privatization of industries, which did not exhibit financial efficiency. The plan also attempted to attract foreign investment by adopting appropriate policies. However, many PEs were established during the period like Lumbini Sugar Factory, Bhrikuti Paper Industries, Nepal Paper Industries, Herbs Production and Processing Company, Nepal Rosin and Turpentine, Bhutan Spinning Factory, Nepal Oriend Magnesite and Nepal Metal Company. Nepal Electricity Corporation and Eastern Electricity Corporation are amalgamates as well as Balaju Textile Factory and Disable Welfare centre during the plan period. National Rice Mill was liquidated and Cendeswai Textile Factory and Nepal Churia Ghee Factory were sold to private sector.

#### **9. The Seventh Five-Year Plan (1985-1990)**

The plan expressed concern at the state of affairs of PEs and pointed inadequacy of return from them as compared to the size of huge HMG investment and therefore called upon the need for running them efficiently. It also called for giving them the required autonomy and recommended suitable reward and punishment on the basis of performance evaluation. Udayapur Cement Co. A was established during the period. Industrial service centre was bifurcated into two separate institutions viz. Industrial District Management Ltd. and Economic Service Center. Likewise Nepal Television, Nepal Coal Limited, Nepal Bitumin & Bare Co., Engineering Consultancy, Nepal

Housing Finance Development Ltd. were established during the plan period. Thus growth of PEs in Nepal has a long history some of which can be attributed to the foreign aid and donor's driver. The objectives of Seventh plan were to increase the contribution of the industrial sector to GDP, to expand the size of industries to meet the basic needs of the people, to promote export and reduce import through an increase in industrial production.

#### **10. The Eight Five Year Plan (1992-97)**

The Eight plans have assigned highest priority to the development of export-oriented, construction-materials producing, import-substituting and basic industries. It has laid emphasis on the industries using indigenous raw materials and labour-intensive industries. In line with the policy of gradually privatizing the public enterprises, the government has handed over some of the public enterprises in private hand. The industrial enterprises Act 1992 and Industrial policy 1992 were introduced to enhance private sector participation. In addition, foreign Investment and Technology Act 1992 and Foreign Investment and One-window policy 1992 were introduced to attract foreign investment for smooth transfer of technology and speeding up industrial development. In this plan period, altogether 16 PEs were privatized.

#### **11. The Ninth Five Year Plan (1997-2002)**

The main objective of privatization is to enhance productive uses of resources, in the light of economic, social and political realities of the country. Privatization programmed encompasses all political, economic, financial, social aspects and is geared to achieve a particular objective. Its direct and indirect effects have tended to disperse across the various sectors of the economy. Hence, the programmer of privatization has been oriented to attain multiple objectives. In line with this, the Ninth Plan conceived the following objectives of Privatization.

- a) To increase the effectiveness and productivity of government resources through efficient utilization.
- b) To make the government role as a facilitator by encouraging and motivating the private sector for participation in economic development.
- c) To maintain economic stability by enforcing financial discipline and relieving the government progressively from the burden of financing corporation deficits.
- d) To promote the participation of common people in the economic development by means of privatization.

During the Ninth Plan Period, the government planned to privatize many PEs but only 9 PEs were privatized in the period.

## **12. The Tenth Five Year Plan (2002-2007)**

The Tenth Five year Plan 2002-2007 is in operation over. The main objective of Tenth five year plan is to make economic sector of country effective healthy, dynamic and competitive by maximum utilization of available resource. The Plan conceives to expand the role of private sector for higher economic growth and effective operation of poverty alleviation programmer. The strategies adopted for the promotion of private sector are as follows;

1. Emphasis on investor friendly environment for forward economic improvement by policy wise guarantee.
2. Provision of entry and drawback of private investment in the every sector economy by defining the role of private sector.
3. Increase in competitive capacity by providing facilities and benefits to the investment sector.

## **13. The Interim Three-Year Plan Period (2007-2010)**

At present, the interim Three-year plan is in operation. The main goal of the interim plan is to prepare a basis for economic and social transformation for building a prosperous, modern and just Nepal. The main objectives of this plan are to realize changes in the life of people by reducing poverty and existing employment and establishing sustainable peace. The target to reduce the people below poverty line form 31% to 24% as well employment growth rate from 3.0% to 3.5% and women participation will be 33% for each sector. Poverty Alleviation and Employment the primary challenge of the plan is to give continuity to poverty alleviate efforts and reduce their increasing gap between rich and poor. The following policies will be taken for poverty alleviation and employment promotion. Investment will be increased for reconstruction, rehabilitation, reintegration and infrastructure development.

The strategy of economic growth based on inclusiveness will be favorable to poverty alleviation.

Inclusive targeted and special region programs will be carried out in various sector based on both geographical and social groups.

### **1.3 Statement of the Problem**

Public trade companies in Nepal emerged in 20<sup>th</sup> century. The main objective of public companies is to make feeling of public ownership, public accounting and operating business for public benefit as well as government. The overall performance of public trade companies is not satisfactory as per their annual reports, economic survey, government report, Nepal Rastra Bank's report and published articles. Public trade companies have sufficient man, money, material, technology, mechanism and information but they could not make full utilization of their resources as well as capacity. Therefore, they could not achieve their objective, because of poor managerial adjustment, which includes the planning, controlling and decision making process. They could not make Public Enterprises successful. Management Accounting tools and technique helps to make managerial adjustments. If they use management accounting tools and technique for planning, controlling and decision making process, they could achieve their desired outcomes. If they are not practices, what might be the reason and what are the difficulties? Do political interferences create difficulties to practice Management Accounting tools and techniques? Is lack of awareness concerning the MA tools and technique? Is lack of Management Accounting experts? If they are practiced, which MA tools and techniques are mostly practiced and how they are being practiced until now?

### **1.4 Objectives of the Study**

The main objectives of the study are as follows.

1. To find out the Management Accounting tools and techniques used in PTCs in Nepal.
2. To identify the process of planning, controlling and decision making process of PTCs in Nepal
3. To identify the management policy towards the Management Accounting tools and techniques.
4. To identify the major difficulties in using Management Accounting tools and techniques in PTCs in Nepal.

### **1.5 Significance of the Study**

Each & every activity has significance. This study also has goes some significance or importance, which are as, follows.

1. It examines the application of Management Accounting tools & techniques in Public trade companies in Nepal.



2. It is useful to the management of public trade companies of Nepal for making policies and strategies.
3. It helps to know the Management Accounting tools & techniques practices in PTC's in Nepal.
4. It examines the policy of govt. towards the MA tools & techniques.
5. It helps to know the management accountants responsibility to provide reliable information for decision-making.
6. It provides guidelines to the researches for further research in Management Accounting.

### **1.7 Limitation of the Study**

Every activity has some limitations. This research study has also some limitations which as follows:

1. The study is concentrated on MA tools & techniques in PTC's in Nepal but it does not show economic aspects.
2. The study covers PTC's in Nepal. So, the findings would not represent to other PEs and private companies in Nepal.
3. The data and other information were collected through got form primary sources because this was survey type research.

### **1.8 Chapter scheme**

This research work was organized into five chapters which as follows:

#### **1. Introduction**

The introduction is first chapter. It covered background of study, a brief review of public enterprises, statement of problem objective of the study, importance of the study and limitation of the study.

#### **2. Review of Literature**

The review of literature is second chapter. It consisted foundation of management accounting, a brief review of MA tools & techniques, a brief review of previous related studies and research gap.

#### **3. Research Methodology**

The research methodology is the third chapter. It consisted introduction or research, research design, population and sample, sources of data collection and statistical procedure.

#### **4. Presentation and Analysis of Data**

The presentation and analysis of data with findings is fourth chapter. It covered introduction, tabulation & presentation, analysis and interpretation of data.

#### **5. Summary, Conclusion of Recommendations**

This is fifth chapter. It included summary, conclusion and recommendation of the study. At finally list of bibliography and appendix are included.

## **CHAPTER-II**

### **REVIEW OF LITERATURE**

#### **2.1 The Management Process and the Role of Management Accounting**

Nowadays, managerial accountants serve as internal business consultants working side by side in cross-functional teams with managers from all area of the organization. In many organizations, managerial accountants take on leadership roles in their teams and are sought out for the valuable information they provide. They are treated as advisors. They are more that just accountants; they are in fact very important business partners. [Bajracharya, Ojha, Goet & Sharma, 2005:4]

In managing the resources, activities and people of the organization, the management process involves the following activities. [Bajracharya, Ojha, Goet & Sharma, 2005:4-7]

##### **1. Planning**

Planning is the process of thinking in advance about future activities. It is a forward thinking process that contemplates to manage the uncertainties and risk. It is the fact of controlling an organization from deviating from its goal. A well set plan is the key to success for an organization. Planning should be such that it reflects the true picture and reality of the organization. Planning is done at both strategic and operational level. Strategy itself is a plan to lead the organization with a long term vision. Planning is developing a detailed financial and operational description of anticipated operations.

##### **2. Decision Making**

Decision making is the process of selecting the best perceived alternative from the available different options. It is to be done in all levels of management. Decision making is all about choosing from among the available alternatives. The management team often comes across situations where decisions need to be taken considering the best interests of the organization.

### **3. Controlling**

Controlling is the process which assures the management that the organization is not deviating from its basic philosophy. It is applied basically in the operational level because the actualization of the plans and strategies done in this level.

#### **2.2 Stewardship, Treasure ship and Controllership Functions of Management Accounting**

##### **1. Stewardship function:**

Stewardship function is a traditional approach of accounting that places an obligation on stewards or agents, such as directors, to provide relevant and reliable financial information relating to resources over which they have control but which are owned by others, such as shareholders. Not only are stewards responsible for providing information, but they must also submit to an audit. Stewardship functions follow proper accounting procedures which satisfy legal and commercial needs but are less vigorous and detailed than the professional practices of management or financial accounting. It is usually applied to small businesses that do not need the more sophisticated techniques. Owing to the popularity and practice of company businesses or corporations, the stewardship function now is almost out of continuation.

[Bajracharya, Ojha, Goet & Sharma, 2005:11]

##### **2. Treasure ship Function**

Treasure ship is a financial manager in a staff position that is responsible for managing organizations relationships with investors and creditors and maintaining custody of the organizations cash, investment and other assets. Management of capital and investment is a distinct area of treasure ship functions. It consists of major activities like financial planning, dealing with capital and money markets, investment decision, cash management, credit management and so on. Value maximization of the organization is its prime objective. [Bajracharya, Ojha, Goet & Sharma, 2005:11]

### **3. Controllership function**

Controller is top accountant in an organization. Controllership activities are primary related to the accounting process. It consists of major activities including financial record keeping and reporting, internal auditing, tax planning, cost accounting, managerial accounting, profit planning, accounting information system and so on. Maintaining financial discipline and profit maximization are the prime objective of controllership functions. Controllership functions basically focus on the management of revenues and expenditures. [Bajracharya, Ojha, Goet & Sharma, 2005:11]

#### **2.3 Management Accounting Tools**

There are various Management accounting tools and technique used for planning, controlling and decision making process for management goals. That tools and technique are listed under.

1. Cost classification & cost estimation
2. Cost allocation
3. Profit measurement & recognition
4. Expenditure analysis
5. Budgeting for profit planning & control
6. Pricing decision
7. Long term investment decision
8. Statement of cash Flow
9. Analysis of financial statement

#### **2.4 Limitation of Management Accounting**

Management accounting suffers from some limitations, which are mentioned below. [Dangol, 2007:13]

1. Management accounting is prepared based on financial account and cost account. So, its effectiveness is limited to the reliability of those sources.
2. A management accountant should have the knowledge of accounting, statistics, economics, principle of management, engineering etc. and only then, the application of management accounting will be useful. The imperfect knowledge of stated discipline may lead to erratic decisions.
3. Management accounting provides only information for helping the management in collecting, analyzing and presenting the data. So, management accounting should not be considered as alternative or a substitute for management.

4. The personal feeling and thinking of an interpreter may affect the decision-making, which may lead to some wrong decision.
5. Management accounting may not be beneficial for small organization, because it is a very costly affair to install this system.
6. Management accounting is still in evolutionary stage and it has not been able to reach the final stage.
7. The establishment of management accounting demands re-arrangement of personnel and their activities and hence there is a possibility of opposition from some quarters or the others within the organization.
8. Conclusions or decisions derived by management accounting are insignificant unless they are properly executed at all levels of business operations.

## **2.5 A Review of Management Accounting Tools**

Management accounting is that branch of the accounting information system of business firm, which uses accounting information for planning, controlling and decision making to achieve organizational goal and objectives. Management must use various tools and techniques of MA for organizational success. Those tools and techniques are as follows

### **2.5.1 Cost Estimation**

How does management go about actually estimating the fixed and variable of costs? Management must have some way of estimating fixed and variety of cost behavior pattern. Cost exhibits a variety of cost behavior pattern. Cost estimation is the process of determining how a particular cost behaves. It is a process of determining the cost for certain levels of outputs. Several methods or models are commonly used to estimate the relationship between cost and activity and thereby have total mixed cost for given level of activity. [Munankarmi, 2002: 25]

### **2.5.2 Methods of Mixed Cost Segregations**

Mixed costs should be separated into variable and fixed components before entering into financial planning, decision making and controlling. Mixed cost separation method are such as Graphic method, high-low point method, Analytical method, average method and least square method which are describe as follows.

#### **1. Graphical Methods (Scatter Diagram)**

The graphical method of dividing mixed costs into their fixed and various components makes use of all relevant past data pertaining to cost- volume relationship. The data

are plotted in a scatter graph. Each point in a chart represents cost for a particular months/days in relation to number of units produced or level of activity. [Khan, 2000: 5:11]

## 2. High-low Method (Two point Method)

As the name suggest, that method makes of two observations rather than all the observation for drawing the cost line. The two points chosen are : (i) The high cost point; and (ii) The low cost points corresponding to same specific volume (may be number of units produced or any other measure of volume such as labour-hours, machine-hours, telephone calls made, power consumed and so on) The algebraic method will yield identical results which formula as follows. [Khan, 2000: 5.12]

$$Y = a + bx$$

$$\text{Variable Value (b)} = \frac{\text{Difference in Cost (CH - CL)}}{\text{Difference in Level of Activity or Production (PH - PL)}}$$

In statistical terms, total cost (Y) is a function of (i) Fixed element, a, and (ii) variable element, b, multiplied by number of units produced or level of activity, X:

## 3. 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. [Dangol, 2007: 27]

$$b = \frac{N \sum xy - \sum x \cdot \sum y}{N \sum x^2 - (\sum x)^2}$$

$$a = \frac{Ny - b(\sum x)}{N}$$

Where, a = Fixed cost per unit/paper

b = Variable cost per unit

N = No. of observations

X = activity measures

Y = Total mixed cost

## 4. Analysis Method

This method also knows 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: [Brown & Howard, 1964: 149]

$$\text{Variable overhead} = \text{Budgeted mixed overhead} \times \text{Degree of variability}$$

## **5. Average Method**

Under this method, total units to find out cost per unit divide total cost. Total cost may be cost of product and other indirect examples. So it is simplest method for calculation.

### **2.5.3 Product Costing Method**

Profits are the excess of revenue over expenses. For the purpose of profit determination in business finished and semi-finished goods in a firm need a true and fair valuation. So income statement is prepared for the evaluation of the performance of the organization. Income statement is prepared under two product costing method for showing the detailed behavior and classification of overhead as follows.

#### **1. Variable Costing**

This method is also known as direct costing and marginal costing. This is a method of separating cost between variable and fixed cost for product under this method only variable manufacturing costs are charged on the product. The components of variable manufacturing cost are direct material, direct labour and manufacturing overhead. Fixed manufacturing costs are not included on the cost of product. [Gyawali, Fago& Subedi, 2006: 3.3]

#### **2. Absorption Costing**

This is a system of separation cost between manufacturing and non manufacturing. The valuation of inventories includes the costs of manufacturing ( variable manufacturing and fixed manufacturing) like direct material, direct labour, variable manufacturing overhead, fixed manufacturing overhead etc. this system includes fixed manufacturing overhead on considers over absorbed or under absorbed of fixed manufacturing overhead on the basis of production volume. [Gyawali, Fago& Subedi, 2006: 3.3]

#### **3. 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 services approves of direct costing for external reporting or tax purpose. Thus all firms use absorption costing for their report to shareholder's and tax authorities. [Horngren, 1991: 538-539]

Product costs and period costs are calculated by the variable as well as absorption costing based. They are;

#### **Under Absorption Costing**

Product costs: = direct material + direct labour + variable manufacturing costs + fixed manufacturing costs.

Period costs: = General and administration costs + selling and distribution costs.

#### **Under Variable Costing**

Product costs = direct material + direct labour + variable manufacturing costs.

Period costs = fixed manufacturing cost + general administrative costs + selling and distribution costs.

[Bajracharya, Ojha, Goel & Sharma, 2005:144]

### **2.5.4 Inventory System**

Either the period inventory system or the perpetual inventory system may be used to account for inventory management.

#### **1. Perpetual Inventory System**

Under a perpetual inventory system, the book figure for the ending inventory is a balancing figure on the accounts, which may be verified periodically by actually counting the items. This counting is referred to as "taking a physical inventory".

[Goyal, 1992: 689]

#### **2. Periodic Inventory System**

Under a periodic inventory procedure, where a perpetual inventory is not maintained, physical inventory is taken periodically and the cost of material used is the balancing figure in accounts. In this case, the cost of material used is perhaps more accurately described as the cost of materials which are assumed to have been used. [Mohan & Goyal, 1992: 690]

### **2.5.5 Inventory Valuation Method**

There are some inventory valuation methods such as FIFO, LIFO, Weighted Average and specific Items. They are described as follows:

#### **1. First in First out (FIFO Method)**

The FIFO method assumes that the items of inventory which were purchased first are sold or consumed first, and consequently the items remaining in inventory at the end



of the period are those most recently purchase or produced. [Bajracharya, Ojha, Goet & Sharma,2005: 175]

## **2. Last in First out (LIFO Method)**

Under the LIFO method, on the other hand, the cost of goods sold and the value of closing inventory can be determined only after the final lot of the year has been received. This is because of the assumption underlying the calculation of inventory, according to this method, as the name LIFO suggests, the use of inventory is valued in the basis of the inverse sequence of receipts. [Khan & Jain, 1992: 6.21]

## **3. Weighted Average Method (End- of-the Months Average Cost Method)**

Under this method, the materials issued during the month are generally costed at the weighted average unit cost (total cost of units divided by number of units) as the end of the previous months. Since the weighted average unit costs at end of the previous month are available during the current period for costing requisitions, this method can be used with either a perpetual or periodic inventory system [Mohan & Goyal, 1992: 695]

## **4. Identification of Specific Items**

The cost of inventories of items that are not ordinarily interchangeable and goods or service produced and segregated for specific project should be assigned by using specific identification of their individual costs are attributed to identify items of inventory. This is an appropriate treatment for items that are segregated for a specific project, regardless of whether they have been bought or produced. However, specific identification of costs is inappropriate when there are a large number of items that remain in inventories could be used to obtain pre-determined effects on the net profit or loss for the period. [Bajracharya, Ojha, Goet & Sharma, 2005:174]

### **2.5.6 Managerial Application of the Cost-Volume Profit Analysis**

Management must be doing CVP analysis for find out business standing position. CVP analysis helps the management to make strategies for success. However, CVP analysis used by some method/ approach which are described as follows:

#### **1. Contribution Margin Analysis**

Contribution margin is the excess of sales price of a unit of output over its variable cost i.e. (S-V). It is the difference between the profits of rupees that is left after variable expenses are deducted. It had to be remembered that “V” is the sum of unit manufacturing costs and the unit marketing and administrative costs. [Gyawali, Fago& Subedi, 2006: 4.2-4.3]

Symbolically,

$$\begin{aligned} \text{Contribution Margin} &= \text{Selling Price} - \text{Variable Cost} \\ &= \text{Fixed Cost} + \text{Profit} \end{aligned}$$

$$\text{Profit/Loss} = \text{Contribution Margin} - \text{Fixed Cost/Expenses}$$

**2. Break- Even Analysis**

At break- even sales, the company just break even i.e. recovers all of its costs. In other words, break even sales volume is that level of sales volume in which a company neither makes a profit nor suffers loss. It will just be able to recover its cost. To put break even point in other words, that is a point at which a company breaks the loss (minus) zone and enters into profit zone. Break even analysis helps the management to know which sales volume will only recovers its cost and after which it starts giving profit. Therefore, it can provide management some insight into profit planning. There are four approaches of calculating break even point. [Akshay, Goet &Bhatttri, 2005:12.2]

**a. Algebraic Equation Method**

$$\text{BEP Sales in Rs.} - \text{Variable Cost} - \text{Fixed Cost} = 0$$

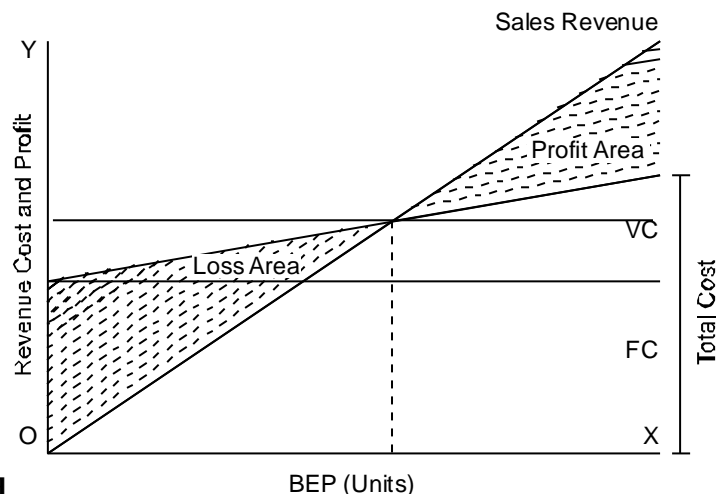
**b. Formula Method**

$$\text{BE Sales (Units)} = \frac{\text{Fixed Cost}}{\text{CMPU}}$$

$$\text{BE Sales (Rs.)} = \frac{\text{Fixed Cost}}{\text{CM Ratio}}$$

**c. Income Statement Method**

Sales revenue (BE sales in Rs.)		xx
Less: Variable cost	xx	
Contribution margin	xx	
Less: Fixed cost	xx	
	Nil	



**d. Graphical Method**

## Sales units

**Figure No. 2.1**

### 3. Margin of Safety

Margin of safety (MOS) is a cushion available to a business firm to protect it against the future business happenings. The larger is the margin of safety; the greater are the chances for the firm to earn profit or vice versa. Margin of safety is also defined as excess of actual or budgeted sales over and above the break even sales. In other words, it is the difference between actual or budgeted sales and break even sales. [Akshay, Goel & Bhattarai, 2005: 12.4]

Symbolically,

Margin of safety (MOS) = Actual Sales Volume – BE Sales Volume

$$\text{Margin of Safety Ratio} = \frac{\text{Margin of Safety}}{\text{Actual Sales}}$$

#### 2.5.7 Pricing of the Product

Price is the value of goods and services. Setting price for goods or service is an important function of the manager of an organization. It is the most crucial and difficult decision of a manager. Pricing is always determined for making profit. There are some techniques for pricing of product which are described as follows:

##### 1. Variable Cost Pricing

Some firms use variable cost pricing system for determination of selling price of the products. Under this system, mark up is added either on total variable manufacturing cost or total variable costs. This method is also known as marginal cost pricing system or contribution margin pricing system. Using variable cost pricing system, the firm sets its price to maximize contribution to cover fixed cost and profit margin. [Fago, Subedi & Gyawali, 2006: 9.5-9.6]

Calculated price under this system is,

Selling Price = Total variable Cost Per Unit + (Mark Up% × Total Variable Cost Per Unit)

$$\text{Mark Up \%} = \frac{\text{Total Profit} + \text{Fixed Manufacturing Cost} + \text{Fixed Selling and Administrative Cost}}{\text{Total Variable Cost}} \times 100\%$$

Target Profit = Capital Employed × Return on Investment (ROI)

## 2. Full Cost Pricing /Absorption Cost Pricing

Under this system of pricing, selling price is determined by adding certain percentage of mark up on total production cost of goods and service. The total cost includes all variable manufacturing cost as well as fixed manufacturing cost for determination of selling price. In long run, price must cover all costs 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 just able price that tends to be perceived as equitable by all parties. Consumers generally understand that a company must make a profit on its product or service in order to remain in business. Justifying a price as total case of production, sales and administrative activities plus a reasonable profit margin, seems reasonable to buyers. The selling price is determined under full cost pricing system as follows. [Fago, Subedi & Gyawali, 2006: 9.2]

Selling Price = Total Cost Per Unit + (Mark Up% × Total Cost Per Unit)

$$\text{Mark Up\%} = \frac{\text{Target Profit}}{\text{Total Cost}} \times 100\%$$

Target Profit = Capital Employed × Return on Investment (ROI)

## 3. Transfer Cost Pricing

A transfer price is the price on submit of an organization charges for products or services supplied to another subunit of the same organization. The transfer price creates revenue for the selling subunit and a purchase cost for the buying subunit, affecting operation income numbers for both subunits. The operating income can be used to evaluate the performance of each subunit and to motivate managers. [Horngren, Foster and Datar, 1999: 377]

The transfer pricing methods are broadly classified cost pricing are as follows.

[Fago, Subedi & Gyawali, 2006:9.31]

- a) Market based transfer pricing
- b) Cost based transfer pricing
  - i) Full cost transfer pricing
  - ii) Variable cost transfer pricing
- c) Negotiable transfer pricing
- d) General formula approach transfer pricing

## 4. Activity Based Cost Pricing

It is a technique of allocating manufacturing overheads to products using multiple application rates and variety of costs drivers in multi product firm. It maintains the

relationship between overhead costs and the activities that causes them. The manufacturing costs are based up on certain costs drivers and the increasing and decreasing ratio of costs depends upon the quantity of cost drivers. The following steps in taken for making pricing decision under ABC pricing system.

- a) Identifying the major activities in the organization
- b) Determine the cost driver for each major activity
- c) Determine the cost driver rate
- d) Calculate total cost based on cost driver
- e) Add mark up total cost and determine selling price

[Gyawali, Fago& Subedi, 2006: 9.13]

## **2.5.8 Budgeting for Profit Planning & Control**

### **2.5.8.1 Concept of Budgeting**

Planning is the key to good management. This is true for individuals, small family owned companies, new high technology companies, large corporations, government agencies, and non profit organization, for example most successful students who earn good grades, finance their education, and finish their degrees in a reasonable amount of time do so because they plan their time, their work, and their recreation. These students and budgeting their scare resources to make the best use of their time money, and energy. Owners of successful companies who survive and grow even in different economic times carefully plan or budget their inventory purchase and their expansion of facilities so that they do not overextend themselves financially but are still able to meet customer's needs. A budget-a formal, quantitative expression of plans (whether for an individual, business, or other organization)- provides a benchmark against which to measure actual performance. A budget can be much more than a limit on expenditure. Although government agencies too often use a budget merely as a limit on their spending, business and other organization generally use budget to focus on operating or financial problems. Thus a budget is a tool that helps managers both plan and control operations.[Horngren, Sundrem & Stration, 2002:253-254]

A budget is a detailed plan expressed in quantitative terms that specifies how resources will be acquired and used during the specifies period of time. The procedures used to develop a budget constitute a budgeting system. [Hilton, 2000:74]

Planning is a primary function of the management process. Planning is the process of setting goals and objectives and translating them into activities and resources required for the accomplishment within a specified time horizon. A budget is a quantitative

expansion of a plan of action and an aid to co-ordination and control. Budgets may be formulated for the organization as a whole or for a subunit. Budgets, basically, are furcated financial statements-formal expression of managerial plans. They are targets that encompass all phases of operations including sales, production, purchasing, and manpower & financing. The annual budgets may be broken down into months, weeks and days of operation. [Bajracharya, Ojha, Goet & Sharma, 2005: 403]

#### **2.5.8.2 Essential of Budgeting**

A successful budget depends on many factors. The essentials for successful budgeting are as follows.

- Support of top management
- Clear and realistic goals and objectives
- Assignment of authority and responsibility
- Creation of responsibility center
- Adaptation of accounting system
- Full participation
- Effectives communication
- Budget education
- Flexibility [Gyawali, Fago& Subedi, 2006: 5.2]

#### **2.5.8.3 Objectives of Budgeting**

The objectives/ purpose of budgeting are as follows.

[Fago, Subedi & Gyawali 2006:5.2]

- To determine future expectations and goals in clear and formal forms for avoiding confusion and facilitating their attainability.
- To communicate expectations to all concerned so that they are under stood, supported and implemented.
- To provide detail plan of action for reducing uncertainty and for the proper direction of individual and group efforts to achieve goals.
- To coordinate the activities and efforts in then way those resources are used efficiently and effectively.
- To provide a means of measuring and controlling performance of individual or unit and to supply in formation but is of which, necessary action can be taken.

#### **2.5.8.4 Budgeting Over Time**

Budgeting over time is an important consideration in planning. Budget range over a time spectrum that runs from the current day to a period some time as for as twenty-

five year in the future, so, various plan are considered for budgeting as described under.

### **1. Strategic Long-Range Plans**

A strategic long range plan is prepared for more than a year (for 5,7 or 10 year) when plans are prepared on a five to ten years basis, they are called long-term or strategic planning. Strategic long-range planning is not concerned with day- to- day operations, although the strategic plan will be the foundation on which short-term planning based [Bajracharya, Ojha, Goet & Sharma, 2005:347]

### **2. Tactical Short-Range Plan or Budget**

Tactical short-range plan or budget is usually prepared for one year; divided into months and quarters. Certainly, the most common form of budget is the annual operating budget. Budget of this kind can be prepared more accurately than can long range forecasts, because they deal with more nearly as certain able facts and probable conditions.

[Bajracharya, Ojha, Goet & Sharma, 2005:347]

### **3. Medium Term Plans**

A medium term planning is prepared for more than one year but not more man 3 years. So, it takes 3 years plans only. Medium term plans are prepared for medium target or objectives. In Nepal government interim budget is prepared from 2007 to 2010 year for peace process period and 24% poverty alleviation target is the objective of interim budget.

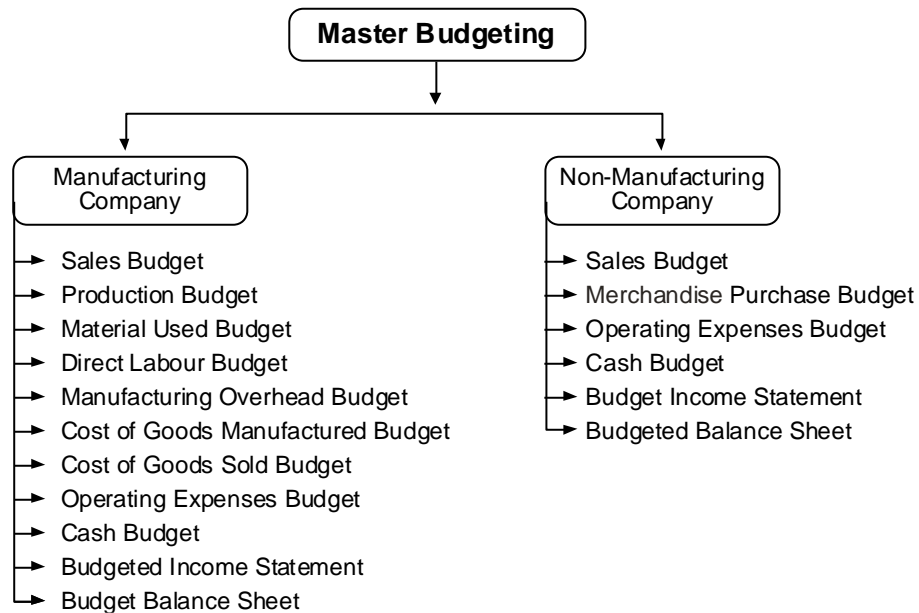
#### **2.5.8.5 The Budgeting Process**

The main objective of a business firm is to make an excess of revenue over expenses so as to maximize profits. But it is not a matter of dream or chance. There are no magic formulas of boosting the figure of profit overnight. Budgeting, if followed properly, can increase the chances of making profits within the given environment. A systematic budgeting should encompass the following procedures. [Bajracharya, Ojha, Goet & Sharma, 2005: 349-350]

1. Evaluating the business environment
2. Setting objectives
3. Setting specific goals
4. Identify potential strategies
5. Communicating the planning guidelines
6. Developing the long-term and short term plans
7. Implementation of budgets
8. Periodic performance reporting and follow-up

### 2.5.8.6 Master Budget

The terms used to describe assorted budget schedules vary from organization to organization, however, most master budget have common elements. The usual master budget for a Manufacturing & Non-manufacturing company has the following components.



**Figure No. 2.2**

However, a master budget can be divided into two part/groups. That is operational budget and financial budget.

#### 2.5.8.6.1 Operational Budget

Operating budgets are concerned with the process of preparing the budgets of each operations/activity like production, sales, purchase etc. of the organization. It includes.

##### 1. Sales Budget

Sales budget is the starting point in the preparation of the comprehensive master budget. All the other plans and budgets are dependent upon the sales budget. The budget is usually presented both in units and dollars of the sales revenue or sales volumes. The preparation of a sales budget is based upon the sales forecast. A variety of methods are used to forecast the sales for the planning period. [Bajracharya, Ojha, Goet & Sharma, 2005: 363]

##### 2. Production Budget

Production planning is the second step of budgeting. Production budget is concern with determining the quantity of the product to be produced and unit of time



production budget is prepared to coordinate the sales budget and inventory policy of organization. Production on budget can be expressed in following formula.

$$\text{Production Unit} = \text{Planned Sales} + \text{Closing Stock} - \text{Opening Stock}$$

### **3. Material Usage Budget**

Under this budget, the quantities of raw material and parts needed for production goods as per production budget are determined. It is the raw material quantity budget developed to know the material for production. Material usage/consumption budget can be computed by following equation.

$$\text{Material usage budget} = \text{Production budget} \times \text{Standard Raw Material usage rate per unit}$$

### **4. Cost of Material Usage Budget**

This budget reports the estimated cost of the materials planned for in the materials budget. Observe that the material budget cannot be costed until the planned cost of purchase. Materials budget is prepared by classifying the types of raw materials, by user responsibility, by interim period, and by types of finished goods.

$$\text{Cost of Material Used} = \text{Planned Production Units} \times \text{Standard Material Usage per Unit} \times \text{Price per Unit of Raw Material}$$

### **5. Material Purchase Budget**

Purchase budget is the process of determining the quantity of raw materials and to be purchased to meet materials consumption and inventory. In other words, purchase budget determines the quantity and price of materials that should be purchased to meet the raw materials for production and inventory level for seasonal variation. It can be expressed in equation of follows. [Gyawali, Fago& Subedi, 20065:5.5]

$$\text{Material Purchase Budget} = \text{Material Usages} + \text{Closing Store of Raw Materials} - \text{Opening Stock of Raw Materials}$$

### **6. Merchandise Purchase Budget**

In trading company, instead of making budgets like direct materials, direct labours, manufacturing overhead, cost of production and cost of good sold budget, it prepares the merchandise purchase budget.

$$\text{Purchase Budget} = \text{Cost of Good Sold} + \text{Closing Stock} - \text{Opening Stock}$$

Where,

$$\text{Cost of Good Sold} = \text{Sales} - \text{Gross Margin}$$

The purchase quantity should be depended upon the inventory level & policy. Management policy with respect to purchase and inventory should be specified. The two basic timing factor for purchase policy are (a) How much to purchase at a time (b) Whom to purchase. (Welsch, Hilton & Gorden, 2000: 244-245)

#### a) **EOQ Technique**

EOQ is a purchase volume of goods in an order and also be considered the minimize cost which is computed as formula way under.

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

Where,

EOQ= Economic order quantity

A= Annual quantity to be purchased

O= Average cost of placing an order

C= Annual carrying cost of carrying one unit in inventory

The level where a purchase is made is called the reorder point.

Reorder point= Average usage X Average lead time + Safety Inventory

#### b) **Just In Time (JIT) Purchasing**

A recent development in materials and parts inventory is called just in time (JIT). Purchasing and manufacturing. In this approach, materials and parts are not purchased until they are needed for production, thereby minimizing the inventory holding cost. In such an approach, it is important to anticipate exactly when the materials and parts will be needed for production so that the acquisition can be reflected in the materials and parts budget for purpose of profit planning and control. [Bajracharya, Ojha, Goet & Sharma, 2005: 372]

#### 7. **Materials Inventory Budget**

This budget reports the planned level of raw material inventory in terms of quantity and material inventory in terms of quantity and costs. The difference in units between material requirements as specified in materials budget and the purchase budget is reflected as an increase or decrease in the inventory budget. [Singh, Ojha & Acharya, 2004:20.12)

This budget specifies the planned level of raw material in terms of quantities and cost for each product and in total. [Goet, Bhattarai & Gautam, 2005: 4.3]

## **8. Direct Labour Budget**

Direct labour cost occupies a significant portion of total production. Therefore, it requires systematic planning and control. The labour budget refers the area of personal needs, recruitment, training, job description and evaluation, performance evaluation, union negotiations and wages and salary administration. The basic objective of direct labour budget is to provide information about direct labour requirement, numbers of direct labour, employees needed, labour cost of each product and investment. [Gyawali, Fago & Subedi, 2006:5.5]

Direct labour cost = production X standards usage rate X wage rate

## **9. Manufacturing Overhead Budget**

Manufacturing overhead budget includes all the expenses incurred other than direct labour and direct material. Therefore, manufacturing overhead may be variable and fixed overhead. Both costs should be considered as a part of manufacturing cost.

## **10. Cost of Good Sold Budget**

The costs of good sold budget clearly distinguish the total costs of goods manufactured and cost of goods sold from the value of inventory. Indeed, it tells us how much of the costs of goods manufactured should be expressed this year and how much cost should be carried to the next year with the inventory. The cost of goods sold budget facilitates the making of the income statement and the balance sheet. The cost of goods sold is the making cost of the sold units. In case of manufacturing business the cost of good sold include the direct material, direct labour and the variable manufacturing costs. [Bajracharya, Ojha, Goet & Sharma, 2005: 379]

## **11. Operating Expenses Budget**

Operating expenses budget represents the all those expenses that are incurred to sell goods and services. It includes selling and distribution expenses, administrative expenses, advertisement, promotion and other expenses. The budget of all these expenses can be prepared jointly or severally. [Gyawali, Fago & Subedi, 2006:5.6]

### **2.5.8.6.2 Financial Budgets**

Financial budget are the budgets that are concerned with the financial implication of operating concern i.e., cash inflows, cash out flows, financial position and operating results. Manufacturing & Non-manufacturing Company has common financial budgets i.e. cash budget, budgeted income statement and budgeted balance sheet.

### **1. Cash Budget**

Cash budgeting focuses on cash inflows, cash outflows and related financing. Cash budgeting is an attractive way to plan and control the cash flows, assess cash needs and effectively uses of excess cash. Therefore, it is very important in all type enterprises. The cash budget is a forecast of expected cash receipts and payments for a future period. A cash budget shows the planned cash inflow, outflow and ending position by interim periods for a specific period. So, a cash budget contains four sections that is the receipts section, the disbursement section, the cash excess or deficiency section and the financing section.

The receipts section consists of beginning balance of cash added to whatever is expected in the way of cash receipts during the budget period. The major sources of receipts and the sales. The disbursement section consists of cash payment that is planed for the budget period; these payments will include raw materials purchase, direct labour payments, manufacturing overhead cost, and so on. Other cash disbursements are income tax, capital equipment purchase, dividend payment, etc. The cash excess or deficiency section totals and the cash disbursement section totals. If deficiency exists; the company will need to arrange for borrowed funds from its bank. If an excess exists, funds borrowed in previous periods can be repaid or the idle funds can be placed in short-term investment. The financing section provides 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 be due on money borrowed. [Bajracharya, Ojha, Goet & Sharma, 2005: 381]

### **2. Budgeted Income Statement**

Planned income statement is concerned with determining the total income of the planned period. It is to be prepaid under accrual basis rather that cash basis of other preceding budgets. [Gyawali, Fago& Subedi, 2006:5.8]

### **3. Budgeted Balance Sheet**

The balance sheet is the final document in the master budget and even in financial record keeping. It is concerned with forecasting total assets & properties, capital and liabilities of the company by time period. It shows the final or ending balances of all the account titles.

### **2.5.9 Zero-Base Budgeting**

Under zero base budgeting, the budget for virtually every activity in the organization is initially set to zero. To receive funding during the budgeting process, each activity must be justified in terms of its continued usefulness. The zero base budgeting approach forces management to rethink each phase of an organization's operations before allocating. [Hilton, 1997:427]

Zero-base budgeting has received great attention recently as a new approach to the budget process. It is a method of budgeting in which manager 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, it means that no costs are viewed as being ongoing in nature: The manger must start at the ground level each year and present justification for all costs in the proposed budget, regardless of the type of cost involved. This is done in a series of "decision packages" in which manager rank all the activities in the department according to relative importance, going form essential to least importance. Presumably, this allows top management to evaluate each decision package independently and to pare back in those areas that appear less critical or that do not appear to be justified in terms of the cost involved. So, it is also known as priority based budget. [Goet, Bhattarai & Gautam, 2005:14:1]

### **2.5.10 Activity Based Budgeting**

To manage costs more effectively organizations that have implemented Activity-based Costing (ABC) have also adopted Activity Based Budgeting (ABB). The aim of ABB is to authorize the supply of only those resources that are needed to perform activities required to meet the budgeted production and sales volume. Whereas ABC assigns resource expenses to activities and then uses activity costs drivers to assign activity costs to cost objects such as products, service or customers), ABB is the reverse of this process. Cost objects are the starting point. Their budgeted output determines the necessary activities which are then used to estimate the resources that are required for the budget period ABB involves the following stages:

1. Estimate the production and sales volume by individual products and customers.
2. Estimate the demand for organizational activities
3. Determine the resources that are required to perform organization activities.
4. Estimate for each resources the quantity that must be supplied to meet the demand.

5. Take action to adjust the capacity of resources to match the projected supply.[  
Drury, 2000;568]

### **2.5.11 Flexible Budget**

In contrast to the performance report based only on comparing the master budget to actual results, a more helpful benchmark for analysis is the flexible budget. A flexible budget (Sometimes called variable budget) is a budget that adjusts for changes in sales volume and other cost driver activities. The flexible budget is identical to the master budget in format, but managers may prepare it for many level of activity. For performance evaluation, the flexible budget would be prepared at the actual levels of activity achieved. In contrast, the master budget is kept fixed or static to serve as the primary benchmark for evaluating performance. It shows revenues and costs at only the originally planned levels of activity. [Horngren, Sudern & Stratton, 1998:295]

A budget prepared at different level of activities is a flexible budget. Flexible budget will furnish the budgeted figures for any level of activity, which a company may actually attain. It reflects costs revenue and profit at the various level of budgeted activity. A flexible budget, as also called a variable, step budget, sliding-scale budget, expenses-formula budget, dynamic budget and expenses control budget. It is a budget which permits revision of estimates of operating cost and profit with charges in sales or production volume. This budget is prepared on the basis of time, demand of product, cost of product, availability of demand of product, cost of product, season and availability of factor of production. In static budget, it is prepared at a single level of activity, with prospect of modification in the light of the changed circumstance is fixed/static budget. Fixed budgets have lacks of flexibility; some degree of flexibility is required to adjust the activity with changed business environment which is not possible under the static budget. Uncertainty in the factor of level of activity, impossibility of comparing actual with budget and complicated task of revising the original budget etc are defects found in fixed budgeting and these make imperative to avoid the rigidity regarding the level of activity and to introduce flexibility in the system of budgeting. [Gyawali, Fago& Subedi, 2006:7.3]

The following methods are used for preparing a flexible budget:

### **1. Tabular Method**

The budget prepared at different level of activities within the range of output. the factor to be taken into consideration for preparing the flexible budget under this method are summarized below:

- i. Determination of level of activity
- ii. Estimation of cost and its behaviour for each level of activity
- iii. Determination of units at the level of activities
- iv. Preparation of flexible budget

### **2. Formula Format**

This format provides a formula for such expenses account in each responsibility centre. The formula gives the fixed amount and the variable rate. This is more compact and generally more useful because the components of each expense are given. The formula format uses straight line relationships. It is a widely used for expressing expenses budget in actual practice. In this the total cost is computed by using equation of  $y=a+bx$ ; where  $y$  is total cost; 'a' is fixed cost and  $X$  is given level of activity.

#### **2.5.12 Capital Budgeting**

Capital Budgeting pertains to fixed/long term assets which by definition refer to assets which are in operation, and yield a return, over a period of time, usually , exceeding one year. It, therefore, involves a current outlay or rises of outlays of cash resources in return for a anticipated flow of future benefits. In other words, the system of capital budgeting is employed to plan expenditure which involve current outlays but are likely to produce benefits over a period of time longer than one year. These benefits may be either in the form of increased revenues or reduced costs. Capital expenditure planning, therefore, includes addition, disposition, modification, and replacement of fixed assets. From the proceeding discussion may be deduced the following basic features of capital budgeting (i) Potentially large anticipated benefits; (ii) A relatively high degree of risk; and (iii) A relatively long time period between the initial outlay and the anticipated returns. The term capital budgeting is used interchangeably which with capital expenditure decision, capital expenditure management, long-term investment decision, management of fixed assets; and so on[khan & Jain 2000:17.1]

The term capital budgeting is used to describe those actions relating to the planning and financing of capital outlays. Capital budgeting decisions are a key factor in the long-run profitability of a firm. There are at least two reasons why this is true. First, funds available for investment are usually limited but investment opportunities may be almost limitless. Therefore, the manager must somehow spread his limited investment funds among many computing opportunities, and do so in a way that will provide the greatest possible return to his firm. And second, most investment opportunities are long-term in nature. Once a firm has made a decision to invest in a particular project, it may become locked into that decision for many years into the future even if it later turns out to be less profitable than another would have been. Because of these factors, capital budgeting decisions are made only after a thorough evaluation of the relative merits of every known alternative. [Garrison, 1976:456]

#### **2.5.12.1 Estimating the Project's Cash Flows**

Cash flow generally indicates a cash outflow and a cash inflow. The key point in investment analysis is to focus exclusively on the difference in expected future cash flows that result from implementing a project. All cash flows are treated as the same whether they arise from operations, purchase or sale of equipment or investment in or recovery of working capital. The opportunity cost and the flowing in or out of the organization and not to the source of the cash. Estimation of the cash flows in an investment projects should cover following process.

1. Calculation of Net Cash Outlay (NCO)
2. Calculation of Annual Depreciation
3. Calculation of Annual Cash Flow After Fax (CFAI)
4. Calculation of Cash Flow in Final Year

#### **2.5.12.2 Techniques of Capital Budgeting**

After estimation of cash flow, the project must be evaluated by various techniques which is classified into two groups /methods i.e. Traditional or Non-discounted methods and discounted cash flow or time Adjusted methods.

##### **1. Traditional or Non-Discounted Methods**

This is the traditional methods and conceptually less satisfactory because they ignore two basic financial principles i.e. the time value of money and total benefits. The following two techniques are applied under this method.



**a) Payback Periods (PBP)**

The number of years required for the proposal cumulative cash flows to be equal to its cash outflow is known as payback period. It can also be define that the year required to cover its cost. The project which provides its return in the smallest period of time is considered as the highest ranking project. Calculation of payback period is different in following two conditions.

**i) Even Cash Flow:**

$$\text{Payback Period (PBP)} = \frac{\text{Net Cash outlay}}{\text{Annual CFAT}}$$

**ii) Uneven Cash Flow:**

$$\text{Pay Back Period (PBP)} = \text{Minimum Required Period} + \frac{\text{Amount Require to Recover Investment}}{\text{Next Year' s CFAT}}$$

**Decision:**

Accept if PBP < Maximum acceptable PBP

Reject if PBP > Maximum acceptable PBP

Independent projects: lower payback period than standard payback period should be accepted.

Mutually exclusive projects: lower payback period should be accepted.

**b) Accounting Rate of Return**

The accounting rate of return is also called the average rate of return. Accounting rate of return indicating to the profitability of the projects instead of net cash flows considers profitability rather than liquidity. According to this method, the projects with higher rate of return are considered better projects than the lower rate of return. It is computed by average the income after tax over the life of a project and then dividing the average annual cash flow by the initial investment outlay.

$$\text{Average rate of return} = \frac{\text{Average Net Income After Tax}}{\text{Average Investment}}$$

**Decision:**

Accept if ARR > Minimum acceptable rate of return

Reject if ARR < Minimum acceptable rate of return

Independent projects. Higher average rate of return than standard average rate of return should be accepted.

Mutually exclusive projects: Higher average rate of return should be accepted.

## 2. Discounted Cash Flow or Time Adjusted Methods

The discounted cash flow methods are theoretically superior to the traditional methods, their superiority to the traditional methods. Their superiority is the use of time value of money. Before evaluation any project under this method the future cash flow must be converted into present value. Under this method, following techniques are used to evaluate the projects.

### a) Net Present Value (NPV)

The Net present value (NPV) method is a DCF approach to capital budgeting that discounts all expected future cash flows to the present using a minimum desired rate of return. To apply the NPV method to a proposed investment project, a manager first determines some minimum desired rate of return. The rate depends on the risk of a proposed project. The higher the risk the higher the minimum desired rate of return. The minimum rate is based on the cost of capital what the firm pays to acquire rate of return, hurdle rate, or discount rate. Managers then determine the present values of all expected cash flows from the project, using this minimum desired rate. If the sum of the present values of the cash flows is positive, the project is desirable. If the sum is negative, it is undesirable. Why? A positive NPV means that accepting the projects will increase the value project's cash inflow exceeds the present value of its cash outflows (if by some chance, the NPV is exactly zero, a decision maker would be indifferent between accepting and rejecting the project). When choosing among several investments, the one with the greatest net present value is the most desirable. [Horngren, Sundern & Stratton. 1998:415]

$NPV = \text{Total present value of annual cash flow} - NCO$

Decision

Accept if  $NPV > 0$

Reject If  $NPV < 0$

Independent projects: Positive NPV should be accepted and negative NPV should be rejected.

Mutually exclusive projects: Higher positive NPV should be chosen.

### b) Internal Rate of Return (IRR)

The internal rate of return (IRR) is an alternative technique for use in making capital investment decisions that also takes into account the time value of money. The internal rate of return represents the true interest rate earned on and investment over

the course of its economic life. This measure is sometimes renewed to as the discounted rate of return. The internal rate return is the interest rate K that when used to discount all cash flows resulting from an investment, will equate the present value of the cash outlays, In other words, it is the discount rate that will cause the net present value of an investment to be zero. Alternatively, the internal rate of return can be described as the maximum cost of capital that can be applied to finance a project without causing harm to the shareholders. [Drury, 2000: 462-463]

The IRR is computing two method i.e. trial and error method of interpolation which formula is following under.

#### **For Trial and Error Method**

PV inflows = PV investment cost

$$\text{Or, } \frac{CF^1}{(1+k)^1} + \frac{CF^2}{(1+k)^2} + \dots + \frac{CF^n}{(1+k)^n} - I_0 = 0$$

#### **Method of Interpolation**

$$\text{IRR} = Lr + \frac{NPV_{LR}}{NPV_{LR} - NPV_{HR}} \times \Delta\text{Rate}$$

Where,

LR = Lower rate

HR= Higher rate

NPV<sub>LR</sub>= Net Present value of lower rate

NPV<sub>HR</sub>= Net Present value of Higher rate

#### **Decision:**

Accept if IRR > required rate of return

Reject if IRR < Required rate of return

Independent projects: If the IRR is greater than cost of cost of capital, the value of the firm increase and project should be accepted. If it is equal to cost of capital, the firm breaks even and if IRR is less than cost of capital, the project should be rejected.

Mutually exclusive projects: the projects one with the higher IRR should be accepted.

#### **c) Profitability Index (PI)**

Profitability index is similar to net present value approach. It measures 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 outlay is called profitability index. The profitability index is calculated as under.

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

Decision:

Accept If  $PI > 1$

Reject if  $PI < 1$

Independent projects: PI greater than 1 should be accepted.

Mutually exclusive projects: PI greater than 1 should be accepted.

### **2.5.12.3 Analysis of Risk and Uncertainty Under Capital Budgeting**

Risk is only condition a decision maker may face uncertainty and risk describe the condition most financial manager face. Probability and statistics proved useful methods for describing such situations can be described as certainty. If more than one outcome is possible but the probabilities of these states of nature are unknown, decisions are made under conditions of uncertainty. Different decision rules are followed in each decision situation. Decision making under risk is different from decision making that considers the degree of risk or uncertainty. Capital budgeting analysis that incorporates consideration of risk may do so either traditional techniques or statistical techniques. They are described of follows.

#### **1. Traditional Techniques**

Under these techniques, Risk adjusted discount rate; certainty equivalent coefficient and sensitivity analysis are doing for analysis of risk.

##### **a) Risk Adjusted Discount Rate**

The Risk Adjusted Discount rate (RAD) approach is one of the simplest and most widely used methods for incorporating risk into the capital budgeting decision. Generally, under this method the risk of the project depends upon the discount rate. If the discount rate is high, that project is considered as a highly risky project and if the discount rate is low that project is considered as a lower risky project. A risk premium rate may be added to risk free discount rate to find out the present value of future return from risky investment proposal.

#### **Decision Rule:**

- i. NPV should be positive by using the risk adjusted rates for acceptance of proposal
- ii. IRR should be greater than the risk adjusted rate of return for acceptance of proposal.

### b) **Certainty Equivalent Co-Efficient (CEC)**

The certainty equivalent approach is an alternative to the risk adjusted rate method to incorporate risk in evaluating investment projects. Under the risk adjusted discount rate method; the risk of the project is taken into consideration by adjusting expected cash flows and not the discount rate. These methods eliminate the problem arising out of the inclusion of risk premium in the discounting process..[Khan and Jain1993]

$$CEC = \frac{\text{Riskless Cash Flow}}{\text{Risky Cash Flow}}$$

### **Decision Rule**

NPV of risk less cash flows should be positive and IRR of risk less cash flows should be greater than risk free rate of return.

### c) **Sensitivity Analysis**

Sensitivity analysis provides information as to how responsive the estimated project cash flows the discount rate and the project life are to estimation errors. An analysis on these lines is important as the future is always uncertain and there will always be estimation errors. Sensitivity analysis takes care of estimation errors by using a numbers of possible outcomes in evaluating a project. The method adopted under sensitivity analysis is to evaluate a project using a number of estimated cash flows to provide to the decision maker an insight into variability of the outcomes.

The sensitivity analysis provides different cash flow estimates under these assumptions.

The best (i.e. the most optimistic)

The normal (i.e. the most likely/moderate)

The worst (i.e. the most pessimistic)

The large in the difference between the pessimistic and optimistic cash flow is considered as riskier is projects depend upon the attitude of decision maker towards the risk.

## **2. Statistical Techniques**

Under this technique, assignments of probabilities, standard deviation, co-efficient of variation and decision tree are doing for analysis of Risk.

### a) **Assignment of Probabilities**

The concept of probability for incorporating risk in evaluating capital budgeting proposal. The Probability distribution of each flows overtime provides information about the expected value of return and the dispersion or the probability distribution of

possible returns. On the basis of the information on 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 (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 proceeding or following year.

**Decision Rule:**

- i) NPV must be positive to accept the project.
- ii) IRR must be greater than cost of capital to accept projects.

**b) Standard Deviation**

Standard deviation that measures of the tightness or variability of a set of outcomes, standard deviation is defined as square roots of the mean of the square 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.[ Gyawali, Fago& Subedi, 2006:12.35-12.36]

**c) Co- Efficient 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]

**d) 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 outcomes 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. [Gyawali, Fago & Subedi, 2006: 12.84]

A decision tree is a pictorial representation in tree form which indicates the magnitude, probability and inter relationship of an 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 is the decision-tree method. A decision tree shows the sequential cash flows and the NPV of the proposed project under different circumstances.[ Bajracharya, Ojha, Goet & Sharma, 2005: 828]

### **2.5.13 Standard Costing**

Standard costing is a system before starting the production and then comparing this with the actual cost of the job after completing the production. The difference between the predetermined or standard costs and the actual costs is termed 'the variance.' Standard costing is the process of the preparation and use of standard cost, their comparison with actual costs and the analysis of variance to their causes and points of incidence. A standard cost is measure of acceptable performance, established by management as a guide to certain economic decisions.[ Bajracharya, Ojha, Goet & Sharma,2005:545]

Standard cost is a predetermined cost, which is calculated from management's standards of efficient operations and the relevant necessary expenditure. It may be used as a basis of price fixing and for cost control through variable analysis. Standard is a predetermine set of objectives based on usual, normal ideal of technical parameters. A standard is always futuristic. Standard costing is the process of the preparation and the use of standard costs, their comparison with actual costs and the analysis of variance to their causes and points of incidence. (CIMA)

#### **2.5.13.1 Standard Costing Process**

Standard costing is a management accounting tool for management control. Controlling is the process of comparing actual results with the planned objectives and determining where adjustment should be made. The management control process encompasses the following steps. [Bajracharya, Ojha, Goet & Sharma, 2005: 495-501]

#### **Setting Standards**

1. Actual performance measurement
2. Variance analysis
3. Compute variances

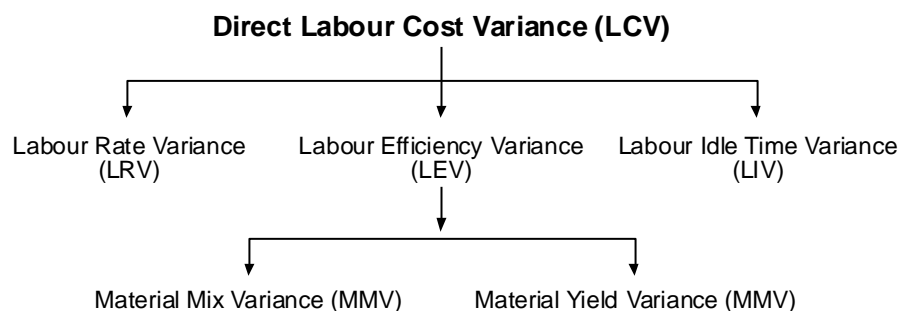
4. Point out the reasons of variances
5. Corrective Action

### 2.5.13.2 Variance Analysis

A variance is the difference between standard cost and actual cost. There are a number of causes, which leads to a difference between the actual and standard costs. All the causes are weighted and the amount connected with each is ascertained and described in a way to indicate the causes leading to the variance. For example, the variance caused by a change in price of materials will be described as materials price variance. A variance which increases profit is called favorable and the variance which reduces profit is unfavorable or adverse. The variance may be broadly classified as under. [Gyawali, Fago & Subedi, 2006: 6.2-6.3]

#### 1. Direct Material Variances

Direct material variances are related with the variance in cost of actual material with cost of standard materials. This variance is created due to change into rate of materials or change into consumption units of materials. Material consumption unit variance is created due to change into the ratio of two or more than two materials and change into output of final product. The material variance can be shown on the following figure.



**Figure No. 2.3**

For calculating the above material variances, the following formulae have to be applied.

- i. Material cost variance =  $SQ \times SP - AQ \times AP$
- ii. Material price Variance =  $AQ (SP - AP)$
- iii. Material Usage Variance =  $SP (SQ - AQ)$
- iv. Material Mix Variance =  $\frac{\text{Total Weight of AM}}{\text{Total Weight of SM}} \times (SC \text{ of SM}) - (SC \text{ of AM})$
- v. Material Yield Variance =  $SR (\text{Actual Yield} - \text{Standard Yield})$



Where,

SQ = Standard Quantity

AQ = Actual quantity

SP = Standard Price

AP = Actual Price

AM = Actual Mix

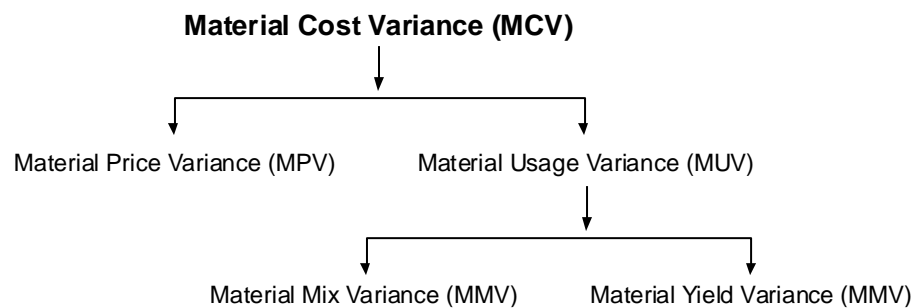
SM = Standard Mix

SC of AM = Standard Cost of Standard Mix

SC of AM= Standard Cost of Actual Mix

## 2) Direct Labour Variances

Direct Labour variances are related with the variance in the cost of actual labour with cost of standard labour. This variance is creating due to change into rate of labour or change into consumption time of labour. Due to cost on time of labour the cost of labour also is high. Labor efficiency variance is concerned with the variance of labour mix and labour yield variance. Labour variance can be shown the following figure as below.



**Figure No. 2.4**

The following formula is applied for find out the above variance.

i. Labour Cost Variance=  $ST \times SR - AT \times AR$

ii. Labour Rate Variance =-  $AT (SR - AR)$

iii. Labour Efficiency Variance =  $SR (ST - AT)$

iv. Labour Idle Time Variance =  $Idle\ Time \times SR$

v. Labour Mix Variance =  $\left( \frac{Actual\ Labour\ Mix}{Std.\ Labour\ mix} \times SC\ of\ SM \right) - SC\ of\ AM$

vi. Labour Yield Variance =  $SR (Actual\ yield - Std.\ yield)$

Where,

ST = Standard Time

AM= Actual Mix

SR = Standard Rate

SM = Standard Mix

AT = Actual Time

SC of SM = Standard cost of standard mix

AR = Actual Rate

SC of AM = Standard cost of Actual Mix

### **2.5.13.3 Budgeting Control and Standard Costing**

Budgeting and standards both provide the basic for comparison with the actual results. Therefore, both these management accounting technique can be applied for performance reporting and maintaining the reward punishment system. There are some difference between Budgeting control and standard costing as follows

1. Budgeting control deals with the operating of a department or the business or a whole in terms of revenue and expenditure. Standard costing is used in manufacturing or producing of product or in rendering a service.
2. Budgeting control seeks to keep in focus the total amount involved and total activity to be carried on. Standard costing provides control to be exercised in the cost of production.
3. Budgetary control is a projection of financial accounts while standards costing is a projection of cost accounts.
4. Budgetary control is generally applicable to all business organization while standard costing can be usefully applied in manufacturing concerns.
5. Budgets prepared under budgeting control system are for specific periods and are based on totals of amount while in standard costing, the standard costs are worked out generally per unit of production.
6. Budgeting control is an effective tool in the control of all types of expenses while standard costing is a very effective tool for controlling elements of costs (like direct material, direct labour etc.)
7. Budgeting control is an effective tool to plant and exercise control over capital expenditure, finance, and cash forecast etc. where standard costing could offer no help.

### **2.5.14 Management Accounting Control System**

Management consists of the basic functions of planning, decision-making and control. Control is the function of management that ensures the proper implementation of plans and policies to achieve the organizational objective. Management functions are just means to maximize profit in terms of current value. Management control system focus on motivating managers for the sake of enhancing total profitability of the

organization. One of the different control mechanisms practiced is management accounting control system. A well - designed management control system aids and coordinates the process of making decision and motivated individual throughout the organization to act in accordance with the decision. It a also facilities forecasting revenue and cost-deriver levels, budgeting and measuring evaluating performance. [Horngren, Sundern and Stratton, 2002]

Components of Management Control System are:

- i. Planning Process
- ii. The responsibility Accounting System

#### **2.5.14.1 Responsibility Accounting**

Responsibility - accounting system are designed to faster goal congruence among the managers in decentralized organizations. Each submits in a organization. Each submit in a organization is designate as a cost center, revenue center, profit center, or investment center. The Managerial accountant prepares a performance report for each responsibility center. These reports show the performance of the responsibility center and its manager for a specified time period. To use Responsibility Accounting effectively, the emphasis must be on information rather than blame. The intent should be to provide managers with information rather than blame. The intent should be to provide managers with information to help them better manage their subunits. Responsibility accounting system can bring about desired behaviour, such as reducing the number of rush order in a manufacturing company. Segmented income statements often are included in a responsibilities accounting system, to show the performance of the organization and its various segments. To be most effective, such reports should distinguish between the performance of segments & segment mangers. Customer profitability analysis is an increasingly used tool, which helps managers to better understand which customers are providing the greatest profit. [Hilton, 1997:601]

Responsibility accounting represents a method of measuring the performance of various divisions of an organization. It focuses on the value of decentralization, which is more essential in case of a large-scale organizations responsibility accounting system becomes more urgent. Major contribution of responsibility accounting in an organization are for decentralization, performance Evaluation motivation, transfer pricing, and drop or continue decision. [Bajracharya, Ojha, Goet & Sharma,2005: 480]

### **2.5.14.2 Process of Responsibility Accounting**

Responsibility accounting encompasses the following steps: [Bajracharya, Ojha, Goet & Sharma, 2005, 461-463]

- i. Identifying the responsibility center
- ii. Delegation of authority and responsibility or decentralization
- iii. Controllability of the object
- iv. Establishing performance evaluation criteria

### **2.5.15 Decision Making**

Decision-making is concerned with the future. It involves a choice between alternatives; it is one of the important but difficult tasks of management. It is the process of evaluating two or more alternatives leading to a final choice. Decision-making is closely involved with planning and is directed towards a specific objective or goal. In business, when evaluation alternative course of action, managers should select the alternative that provides the highest incremental benefit to the company. In some instance, all alternatives result in incremental losses, and the managers must choose the one that causes the smallest incremental loss. While making decisions in business, managers should be economically rational. Long-term profit maximization is the core of business decisions. Therefore, financial feasibility is the prime determinant in selecting the best alternative. The course of action, which maximizes profits by increasing revenues or minimizing costs, is considered as the most economic one. Opportunity costs, which are the benefit foregone in the next best alternative, must be counted in the alternative, must be counted in the alternative to be undertaken. And also other non-quantitative factors must be taken into account before the management takes the final action or decision.

#### **2.5.15.1 Process of Decision Making**

The following are the steps involved in the process of rational decision-making:

1. Recognize and define the problems
2. Identify appropriate possible solutions to the problems
3. Evaluate selective alternatives
4. Select the best alternatives
5. Implement the selected alternative
6. Evaluation and follow up

### **2.5.15.2 Types of Decisions**

#### **1. Drop or Continue Decision**

When a firm or company is divided into many departments, divisions, sections, branches and product lines to produce and sell various types of product, it is not necessary for earning profit by each product line, division, department, and branch. In case of loss or low profit from one or more, management should take decision whether to drop or continue product line in the future. While, taking drop or continue product line decision, it is very important to consider various points i.e. alternative utilization of idle capacity like machine, labour, land etc.: continuity of constant cost/fixed cost, department or traceable fixed cost, opportunity cost, government rules and regulation regarding dropping product, union activity, Effect on other product lines, Responses of material suppliers and regular customer etc.

#### **2. Special Order Decision**

A special order is one that has been offered for a bulk volume at a reduced price. Opportunity consider an order for a quantity of its regular product at a special price, usually less than that charged to regular customer, frequently arises for a management. When there is idle capacity, such an offer may be attractive. The basis of decision Making should be the difference that it will make in the overall profit of the company, Essentially, if there is idle capacity, the special order is advantageous if the price amounts exceed out of pocket costs and the opportunity costs. The purposes of a short-run price reduction may be increasing market share, loss leaders and disposing of inventories.

#### **3. Cash or Purchase Decision**

A Business firm needs various types of assets and properties like plant and machinery, land and buildings, departmental stores, etc. for many years. The firms can obtain these assets and properties either by purchasing on cash or paying lease rent over years without buying them. Leasing is the arrangement used to obtain assets without buying from outright. Therefore, lease is the agreement or document which transfer right of the owner (i.e. lessor) to the tenant (called lessee) in the exchange of the rent to be paid over the years to the lessor. The document includes the rights and duties of lessor and lessee relating to the use of the property. It transfers the possession of property. It transfers the possession of property to the tenant for specific property. When the lease period is over, lease period can be renewed, or possession of the

property can be returned back to the lessor. But a firm can purchase assets and properties on cash borrowing from outsource, issuing shares, debentures, or using equity of shareholders. In case of outright purchase, the purchaser obtains both ownership and possession from the seller in return from a certain sum paid. [Gyawali, Fago& Subedi, 2006:8.79]

#### **4. Quotation Process**

A business firm needs various types of small assets for daily operations. The small assets are stationery items such as paper, pen, stamps, punching machine, clip file, whiteboard, plastics, pin, boxes etc. The firms can obtain these assets by quotation process. So, quotation process is also say for small financial activities.

#### **5. Tender Process**

A business firm needs various types of assets, properties like plant machinery, land, building, department stores etc. for many years and construction work can be doing. That time the firm can be doing that activity by tender process. So, Tender process is also say for great financial activities which is fixed by law.

### **2.5.16 Managerial Use of Financial Statement Analysis**

Before discussing about financial analysis it is necessary to know about the financial statement and report which is issued by company annually, periodically to its stakeholders. This gives a complete account of financial health of the company. The financial statement and report generally consists following terms.

- The Income Statement
- The Statement of Retained Earnings
- The Balance Sheet
- The Statement of Cash Flows

The income statement contains two broad categories of items: Revenue and expenses. The “revenues” may be through of as the level of accomplishment attained by the company, while the “expenses” represent the effort expended to attain the level of accomplishment. More specifically, revenues represent the actual or expected inflow of assets, the settlement of liabilities, or both, from a company's primary business activity, while expenses represent the utilization or consumption of assets or incurring of liabilities or both, to produce the revenue inflow.

The statement of retained earnings shows how the net incomes of the period were appropriated or distributed. The statement shows the change in retained earnings between the beginning and the end of a period. Retained earnings is that portion of the firm's earnings that has been saved rather than paid out as dividends.

The objective of a balance sheet or statement of financial position is to provide, as of a specific point in time, information concerning the assets owned by the company and the equity interest (of both the creditors and owners) in those assets. The proper recognition, valuation, and classification of company assets and equities are intended to aid the users of financial statements in assessing the solvency, liquidity, and financial flexibility of the company. The fundamental relationship reported in a balance sheet is expressed by the classic accounting equation. [Bajracharya, Ojha, Goel & Sharma, 2005: 1012]

Assets = Liabilities + Owner's Equity

#### **2.5.16.1 Cash Flow Statement**

Cash is the life blood of any business organization. Without cash no business activities can be taken place. In recent years, the statement of cash flow has come to be viewed as a part of all set of financial statements. Cash flow statement provides relevant information about the cash receipts and cash payments of an enterprise during a period. Information about enterprises cash flows is useful in assessing its liquidity, financial flexibility, profitability and risk. Cash flow information is widely used by investors, analysts, creditors, managers and others. It shows how the accrual accounting information is converted into cash-based information and arranges the information so that investors, analysts, creditors, managers and others can better understand the cash efforts of companies operating, investing and financing activities. The primary purposes of a statement of cash flow is to provide information about the cash receipts and cash payments of the company and how they related to the company's operating, investing and financing activities. The cash flow statement helps to assess the solvency of a business and to evaluate its ability to generate positive cash flows in future periods, pay dividends and finance growth. In Nepal, Nepal Company Act 2053 also made mandatory to present cash flows statement along with balance sheet and income statement. So, each and every company should prepare it as integral parts of its financial statement for each period for which financial statements are presented.

### **2.5.16.1.1 Objectives of Cash Flow Statement**

Cash flow statement is an important tool which provides information to its users about the ability of the company to generate cash and its utilization. The main objectives of cash flow statement are listed at below.

- 1) To help the financial manager to explain the situation of cash
- 2) To make easy to prepare cash budget for the specific period for future reference.
- 3) To help know the causes of changes in the cash position on two dates.
- 4) To help to evaluate the financial position of an organization.
- 5) To help to know the cash position so that it can make plans and policies regarding decision making activities for short term and long term financing.

### **2.5.16.1.2 Preparation of Cash Flow Statement**

A specific procedure should be followed while preparation of cash flow statement should report cash flows during the period classified by operating, investing and financing activities. So the first process is preparing the statement of cash flows is to calculate the cash flow from operating activities using either the direct or indirect method. The second process is to analyses the information for changes resulting from investing and financing activities. The third process is to arrange the information gathered in process first and second into proper format for the statement of cash flow. Now, the detail process of cash flow statement is described as follows:

#### **1. Determination of Cash Flows from Operating Activities (Direct Method)**

The Direct method of cash flow converts its income statement from accrual basis to the cash basis. Operating activities involve producing and delivering goods and providing services. Cash flow from operating activities includes receipt from customers for sales of goods and services (collection from debtors). Cash outflows from operating activities include payments to purchase of materials and for services, payment to employees for services and payment and to government for taxes and duties.

**Indirect Method:** Indirect Method is that type of method which calculates the cash flow from operating activities by considering the non-cash items. The non-cash expenses are added on net profit and non-cash income is deducted on net profit and changes in working capital are also considered.



## **2. Determination of Cash Flows from Investing Activities**

Investing activities involve making and collecting loans and acquiring and disposing of fixed assets. Cash inflows from investing activities are receipts from sale of shares, debenture or outflow under investing activities are purchase of share and debenture of other enterprises, purchase of fixed assets etc.

## **3. Determination of Cash Flows from Financing Activities**

Financing activities involve obtaining resources from owner and providing them with a return of their investment, borrowing money and repaying amounts borrowed. It also includes incoming of cash by issue of share and debenture, issue of long term loan, payment of dividend, repayment of principal with interest etc.

### **2.5.16.2 Techniques of Financial Statements Analysis**

Stakeholders of a business firm perform several types of analyses on a company's financial statement. All of these analyses rely on comparisons or relationships of data that enhance the utility or practical value of accounting information.

#### **1. Common-Size Statements**

The analysis of common size statements is also called vertical analysis. Common size statements express all items in the statement as a percentage of a selected item (the base) in the statement. Analyses also use vertical analysis of a single financial statement, such as an income statement. Vertical analysis consists of the study of a single financial statement in which each item is expressed as a percentage of significant totals. Vertical analysis is especially helpful in analyzing income statement data such as the percentage of the cost of goods sold to sales. Financial statements that show only percentages and no absolute amounts are common-size statements. All percentage figures in a common-size balance sheet are percentages of total assets while all the items in a common-size income statement are percentage of net sales. The use of common-size statements facilitates the vertical analysis of a company's financial statements. [Bajracharya, Ojha, Goet & Sharma, 2005: 1014-1015]

#### **2. Horizontal Trend Percent Analysis**

Horizontal analysis is the analysis of financial statement over a series of years. Comparative financial statements present the same company's financial statement for one or two successive periods in side-by-side columns. The calculation of changes in absolute amount or percentage change in the statement amount or percentage change in the statement items or total is horizontal analysis. This analysis detects changes in a company's performance and highlights the trends. Trend percentages are similar to

horizontal analysis except in that comparisons are made to a selected base year or period. Trend percentages are useful for comparing financial statements over several years because they disclose changes and trends occurring through time. [Bajracharya, Ojha, Goet & Sharma, 2005: 1016]

### **2.5.16.3 Ratio Analysis**

An analysis of financial statement with the help of ratio may be termed as ratio analysis. It is a mathematical relationship between two related items expressed in quantitative form. When this definition of ratio is explained with reference to the items shown in financial statement, then it is called accounting ratio. So, the ratio is the measurement of quantitative relationship between two or more items of financial statements connected with each other. The quantitative relationship may be expressed in terms of proportion, in rate, in time, in percentage or coefficient. There are different types of ratios analysis which is listed under.

#### **1. Liquidity Analysis**

It measures the adequacy of a firm's cash resources to meet its near term cash obligations. Short-term lenders such as suppliers and creditors use liquidity analysis to assess the risk level and ability of a firm to meet its current obligations. Satisfying these obligations requires the use of the cash resources available as of the balance sheet date and the cash to be generated through the operating cycle of the firm. Under liquidity analysis, therefore calculate the current ratio and quick ratio.

#### **2. Long Term Debt and Solvency Analysis**

It examines the firm's capital structure in terms of the mix its financing sources and the ability of the firm to satisfy its long-term debt and investment obligations. This analysis contains the debt equity ratio and debt to total capital ratio.

#### **3. Activity Analysis**

To carry out one's operations, a firm needs to invest in both short-term (inventory and accounts receivable) and long-term (property, plant and equipment) assets. Activity analysis describes the relationship between the firm's level of operations (usually defined as sales) and the assets needed to sustain the activity. This analysis contains the inventory turnover, daily sales outstanding, fixed assets turnover, total assets turnover and capital employed turnover ratios.

#### **4. Profitability Analysis**

Profitability is an indicator of efficiency of the business organization. Profitability ratio measures the management overall efficiency as show by the return generated from sales and investment. Higher the profitability ratio shows the efficiency of the management. Profitability in relation to sales as well as investment. So, profitability analysis consists some ratio i.e., Net Profit Margin, Gross Profit Margin, Operating Cash Flow Margin, Return on Assets (ROI) and Return on Common Stockholders Equity.

#### **2.6 Review of the Previous Thesis**

Profit planning and control is important part of management accounting. Without profit planning and control management accounting is not sufficient. So, profit planning and control is backbone of management accounting. Researches in the area of profit planning and control practices have been made many but researches in the area of management accounting practices have not made many in Nepalese context. An attempt is made here to review some of the researches, which have been submitted in profit planning & control as well management accounting practices in the context of Nepal are following one by one respectively.

2.6.1 Mr. Tulasi Prasad Shrestha (1998) had conducted a research on a topic “Profit Planning in SRI Bhrikuti Pulp and paper Nepal Limited.” Mr. Shrestha had mainly focused on the practice and effectiveness of profit planning system in SBPP. The time period covered by the research was five year from FY 2051/52 to FY 2055/56. Necessary data and other information were collected from both the secondary and primary sources of data. In his research, Mr. Shrestha had pointed out various objective and findings. The major objectives of his study were follows:

- To understand theoretical concept of profit planning.
- To examine and analyze the practice and effectiveness of profit planning in SBPPNL.
- To analyze the various functional budgets used by the company.
- The evaluate the variance between planned and actual of the company.
- To provide recommendation and suggestion.

Some of the major findings were as follow:

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

2.6.2 Mr. Madhu Sudan Bhattarai (1999) had conducted a research on topic "Profit Planning of Non- Manufacturing Public Enterprise in Nepal. A case study of Nepal Oil Corporation Limited". Mr Bhattarai had mainly focused on appraise of the performance of NOC. The time period covered by the study was five years from FY 049/50 to FY 053/054. The necessary data and other information had been collected from secondary as well primary sources of data. In his research, Mr. Bhattari pointed out various objectives & findings. The major objectives of his study were follows:

- To study the various accounting system of NOC.
- To examine the procurement and distribution channel system of petroleum oil and lubricant products
- To analyze the profit planning of NOC.
- To provide recommend and the provided suitable suggestions to the corporation.

Some major findings were as follow.

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

2.6.3 Madan Bahadur Badu (1999) had conducted research study on "Profit Planning in Dairy Development Corporation." Mr. Badu has centralized his study in current practice of profit planning in DDC. The time period covered by the research was five years from FY 2049/50 to FY 2053/54. The data and other

necessary information were collected from secondary and primary sources of data. In his research, Mr. Badu had pointed out various findings. Some major findings were as follow:

- No proper were of segregation of cost into fixed and variable.
- No maintenance of periodic performance report systematically.
- Plan is prepared on ad-hoc basic.
- Inadequate authority and responsibility to planning department.
- No proper analysis of environmental variables.

2.3.4 Mr. Narayan Prasad Bhattarai (2000) had conducted a research on the topic “Profit Planning in Central Zoo.” The main focus of his research was the application of profit planning and control and its effectiveness in central zoo. The time period covered by the research was five years from FY 2051/52 to FY 2055/56. Necessary data and other information were collected from secondary as well as primary sources of data. In his research, Mr. Bhattarai had pointed out various findings and recommendations. Some major findings were as follow:

- Goals and objectives of the central zoo aren't clearly communicated to the lower level and there is lack of responsibility accounting system.
- Participation of lower level in planning and decision making is nil and there is still shortage of management by objectives techniques.
- The public participation approach, which helps for the entire wildlife conservation and environment protection.

2.6.5 Mr. Laxmi Prasad Prasai (2000) had conducted a research on the topic “Profit Planning in Ilam Tea Estate” Mr. Prasai's main focused of the study was the current practices and effectiveness of profit planning. The time period covered by the research was five years from FY 2050/051 to FY 2054/55. The necessary data and other information were collected from secondary as well as primary sources of data. In his research, Mr. Prasai had pointed out various findings. Some major findings were as follow.

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

- Un-necessary centralization of power so the decision making is only from Top-level.
- Inadequate forecasting system.
- Failure to maintain periodic performance and so system of reward and punishment.

2.6.6 Miss Abha Subedi (2001) had conducted a research on the topic "Profit Planning in Commercial Bank; A Case Study of Rastriya Banijya Bank." Miss Subedi had focused her study in the investment policy of Rastriya Banijya Bank with the current practice of profit planning and its effectiveness in Rastriya Banijya Bank. The time period covered by the research was five years from FY 1993/94. The data and other information were collected by using secondary as well as primary sources of data. In her research, Miss Subedi had pointed out various findings and recommendations. Some remarkable findings were as follows:

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

2.6.7 Miss Pramita Dangol (2001) had conducted a research on the topic "Profit planning in manufacturing public Enterprise; A case study in Hetauda Cement Industry Ltd." Miss Dangol had focused her study in the application of profit planning concepts in PE's. The time period covered by the research was five years from FY 2051/52 to FY 2055/56. The necessary data and other information were collected from secondary as well as primary sources of data. Miss Dangol had pointed out various findings. Some remarkable findings were as follow:

- No proper application any effective sales foresting technique.
- Planning of budgeting policy of the company is very poor and there is no system of taking corrective action for pre-planning.
- Decision making power is centralized.

- There were no clear cut duties and responsibilities of the employee.
- 2.6.8 Mrs. Dozey Tater (2001) had conducted a research on the topic “profit planning is soft Drinks Industry; A Case Study of Bottlers Nepal Limited Balaju.” The period covered by her study was six years from FY 1993/94 to FY 1999/00. The necessary data and other information were collected from secondary as well as primary sources of data. The basic objectives of the study were to examine how far the different functional budgets were being applied as tools of profit planning in business enterprises. In her research, Mrs. Dozey Tater had pointed out various findings were as follow:
- Specific goals and targets were not found to be defined clearly to achieve the basic objectives of BN Ltd.
  - There was lack of defined authority and responsibility. So there is no proper coordination between the various responsibility departments.
  - Inadequate profit planning due of experts/planners.
  - Financial performance of the company was not satisfactory.
  - The company failed to maintain its periodic performance and there was no proper rewards and punishment system.
- 2.6.9 Mr. Sagar Sharma (2002) had conducted a research on the topic “Management Accounting Practices in Listed Companies of Nepal.” He had focused his study to examine the practice of Management Accounting tools in the listed companies of Nepal. Mr. Sharma's research study was based on only primary sources of data. Stratified random sampling with proportionate allocation of percentage was followed to draw the sample. In his research, he had pointed out various objectives & findings, among those some remarkable objectives are as follow:
- To study and examine the present practice of management accounting tools in the listed companies in Nepal.
  - To identify the areas where management accounting tools can be applied to strength the companies.
  - To identify the difficulties in applying management accounting tools in Nepalese companies.
  - To make recommendations to overcome the difficulties in applying management accounting tools in Nepalese companies.

Some major findings were as follow.

- Different types of Management Accounting tools, which are tough in the colleges, are not found applied by the listed companies of Nepal.
- Management Accounting is help to managers in overall managerial activities by providing information and helping in planning, controlling decision making.
- Nepalese listed companies are infant stage in practicing of management account tools such as capital budgeting, annual budgeting, cash flow, ratio analysis, zero based budgeting, activity based costing, target costing and value engineering
- As Nepal is proceeding towards globalization and has got the membership of WTO, companies are recommended to apply management accounting tools of fit with the global environment.

2.6.10 Miss Kalpana Bhattari (2004) had conducted a research on the topic “Budgeting in Public Enterprises; A Case Study of Nepal Telecom”. The main objective of her 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 FY 2055/56 to FY 2060/61. In her research, she had pointed out various Objectives & 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 follow.

- 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 to proper coordination between various directorates in regard in the goal and objectives of the corporations.



- The corporation fails to analyze its strengths and weakness in depth because of the absence of the competitors.
- Lack of skilled planners and experts.
- Gap between actual production and actual sales.

2.6.11 Mr. Bodha Raj Tripathi (2005) had conducted a research on the topic “Profit Planning in Manufacturing Enterprises of Nepal; A Case Study of Harrisiddhi Brick and Tiles Factory”. He had focused his study in the application of profit planning in manufacturing enterprises. The time period covered by the research was 12 years from FY 2047/48 to FY 2058/59. The necessary as well primary sources of data. In his research, he had pointed out various objectives & findings. Some remarkable Objectives were as follows:

- To analyze the absolute profit and losses of HBTF.
- To examine and analyze the various functional budgets those are prepared by HBTF.
- To evaluate the variance between target and actual sales of HBTF.
- To assess financial performance of HBTF in terms of various financial ratios and cost structure.
- To examine relationship between the financial performance of the factory and the market price of the share of the factory.

Some major findings were as follow.

- HBTF Ltd. prepares functional budgets like sales budget, production, budget, expenses budgets on annual basis. But the short term product wise production and sales budgets on monthly basis. But they are found to be found far from real life situation.
- Marketing manager is responsible for sales forecasting in HBTF. Forecasting is said to be done keeping in view different situations and past records but it is not supported by necessary marketing strategy for promotion.
- The sales target set with foresting is ambitions. Actual sales are less then that of targeted sales. There is significance difference between targeted sales an actual stale. This shows lack of promotional activities to increase sales.
- Although, straight-line trend shows the positive sales figure for the future, it is for below the volume of sales to operate at BEP level.
- The poor financial performance of the factory has also led to decline in its market price of share.

2.6.12 Mr. Ailendra Kumar K.C. (2006) had conducted a research on the topic “Management Accounting Practices in Public Enterprises.” 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 follow:

- 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 managers to formulate organizational strategies as well as policy. PE's as practicing MA tools such as Capital Budgeting, Annual Budgeting, Cash Flows and Ratio Analysis. And not practicing MA Tools such as zero Based Budgeting, Activity Based Budgeting, Activities 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 MA is similar to financial Accounting.
- Lack of information and cognizance about MA tools are the main factors causing problem in the application of such tools.

2.6.13 Mr. Krishna Bdr. Karki (2006) had conducted a research study on "Management accounting practice in Joint Venture Banks of Nepal." He had focused his study to examine the practice of MA 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 MA tools, which are tough in the colleges are not found applied by the Joint Ventures Banks of Nepal. So, it shows gap between the theory and practice.
- MA is help to managers to formulate organizational strategies as well policy for decision making.
- In NJVBs, practice of hiring outside expert almost nil. Thus it can be concluded that NJVB's are in infant stage in practicing of MA tools. Now, here in the banks cannot find MA experts.
- In NJVBs practicing the MA tools such as capital Budgeting, Annual Budget, Ratio Analysis and cash flow. And not practicing MA tools such as zero Based 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.

2.6.14 Mr.Narayan Prasad Acharya (2006) had conducted research study on topic "Management Accounting practice in Nepalese Public Enterprises." He had focused his study to examine the practices of MA 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 MA tools and techniques made in Nepalese PEs.
- To identify the business sector, where MA tools can be applied to strengthen the PEs.

- To identify the major difficulties for applying the MA tools in Nepalese companies.
- To make recommendation to overcome the difficulties in applying MA tools and techniques in Nepalese PEs and other business companies.

Some major findings were as follow.

- Different types of MA 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 MA 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-based 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 & revenue.
- Government's policy was affecting to more then half of NPE's for making the account related decisions.
- Role of MA tools and technique were found negligible for making MA related decision.

## **2.7 Research Gap (Different Between the Current Research and Previous Research)**

There is the gap between the present research and previous research. Previous researches conducted on accounting on profit planning control were public enterprises as well as private enterprises based on a case study of particular company or a comparative study of two more companies. Previous researches conducted on accounting on profit planning control were only on the budgeting practices in manufacturing companies especially in public enterprises and their findings were based mostly on secondary data. Previous Researches conducted on Management Accounting practices were not

sufficient and they were concerned especially on public enterprises. Public Enterprises consists various sector like manufacturing, trade, financial, public utility and social service sector. This study focused only Public Trade sectors. This research examines the present practice of management accounting tools in Public trade companies in Nepal and disclosed the reason about the management accounting tools which were not practiced for planning, controlling and decision making process.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

Decision regarding what, where, when, how much, by what means concerning an enquiry or a research study constitute a research. “A research design is the arrangement of conditions for collection and analysis of data in manner that aims to combine relevance to the purpose with economy in procedure” In fact the research constitutes the blueprint for the collection, measurement and analysis of data. As such the design includes in outlines of what researcher will do from writing the hypothesis and its operational implications to the final analysis of data.

‘After the research study has been formulated, the next logical steps are to construe the research design which refers to the entire process of planning and carrying out a research study. The research design asks what approach to the problem should be taken? What methods will be used? ; What strategies will be most effective? Identification, selection and formulation of a problem may be considered as the planning stage of a research. The remaining activities refer to the designs, operation and completion of the research study’. [Wolf and Panta, 2005:53]

Design is the overall plan of any future activity. The research design is the specification of methods and procedures required to conduct and complete the study. So, the research design implies procedures, techniques and method.

#### **3.2 Sources of Data**

The data were mainly collected from only the primary sources. Primary data were collected through questionnaire, interview and group discussion.

#### **3.3 Population and Samples**

Nepalese Public Trade Companies were considered as the total population. Covering six Nepalese Public Trade Companies.

### 3.4 Data Processing Procedure

This section consisted presentation, interpretation of available data and test of hypothesis. The data collected from questionnaire were in the form of raw. They were converted into table form according to questionnaire's objective. Simple arithmetical percentage tools were used for analysis and interpretation of data.

### 3.5 Statistical Tools Used

Statistical tool like chi-square (2) was use for the test of hypothesis for major findings.

This study tests the following hypothesis:

#### **Hypothesis 1:**

**Null Hypothesis  $H_0$ :** There is no significant relationship between the use of cost segregation into fixed & variable and profit & loss account. (Use of cost segregation into fixed & variable and Profit & loss account are independent)

**Alternative Hypotheses  $H_1$ :** There is significant relationship between the use of cost segregation into fixed & variable and profit & loss account. (Use of cost segregation into fixed & variable and Profit & loss account are independent)

#### **Hypothesis 2:**

**Null Hypothesis  $H_0$ :** There is no significant relationship between the use of pay back period and net present value. (Use of pay back period and net present value are independent)

**Alternative Hypothesis  $H_1$ :** There is significant relationship between the use of pay back period and net present value. (Use of Pay back period and net present value are dependent)

#### **Hypothesis 3:**

**Null Hypothesis  $H_0$ :** There is no significant relationship between the use of break even analysis and cash flow analysis. (Use of break even analysis and cash flow analysis are independent)

**Alternative Hypothesis  $H_1$ :** There is significant relationship between the use of break even analysis and cash flow analysis. (Use of break even analysis and cash flow analysis are dependent)

#### **Hypothesis 4:**

**Null Hypothesis  $H_0$ :** There is no significant relationship between the use of annul budgeting and ratio analysis. (Use of annul budgeting and ratio analysis are independent)

**Alternative Hypothesis  $H_1$ :** There is significant relationship between the use of annul budgeting and ratio analysis. (Use of annul budgeting and ratio analysis are dependent)

## CHAPTER-IV

### PRESENTATION AND ANALYSIS OF DATA

#### 4.1 Introduction

This is a survey type research. The main objective of the research is to study and examine the present practice of Management accounting tools and techniques in PTC's of Nepal. The sub-objective are to identify the MA tools and technique can be applied to strengthen the performance of PTC's of Nepal and another objective is to identify the major difficulties in application of Management Accounting in PTC's of Nepal. So, to achieve these objectives of the research, this chapter includes the presentation, analysis and interpretation of data.

To meet the objectives, all the PTC's of Nepal (i.e. six company) were taken as target population. Seventeen tick marks and open-end questions as well as discussion were included in the questionnaire to find out correct reliable data and information.

The raw data were properly processed, tabulated and analyzed because primary data collected through survey. The data were tabulated into 17 tables. Two different hypothesis were tested by chi-square ( $\chi^2$ ) statistical tools. The major findings of the research were based on the analysis and interpretation of data, which are included at the end of this chapter.

#### 4.2 Percentage Analysis of Management Accounting Practice in Public Trade Companies of Nepal

**Table- 4.1**

**Practice of Management Accounting Tools in PTC's of Nepal**

S.N.	Tools	No. of Respondents	No. of Practitioner	%
1	Cost Segregation into Fixed and Variable	6	3	50
2	Break-Even Analysis	6	3	50
3	Long- Term Budget	6	-	-
4	Annual Budget	6	6	100
5	Responsibility Accounting	6	4	67
6	Capital Budgeting	6	3	50
7	Ratio Analysis	6	3	50



8	Cash Flow	6	5	83
9	Activity Based Budgeting	6	2	33
10	Zero Base Budgeting	6	-	-
11	Standard Costing	6	-	-

Table 4.1 shows the practice of MA tools in PTC's of Nepal. The MA tools practiced were cost segregation into fixed and variable, break-even analysis, budgeting annual, responsibility accounting, capital budgeting, ratio analysis, cash flow and activity based Budgeting. None of the PTC's of Nepal practiced long term budgeting, standard costing and zero base budgeting.

Different Management Accounting tools are needed to be carried out for planning, controlling and decision making processes. Almost 50% of PTC's of Nepal were practicing cost segregation into fixed and variable, break-even analysis, capital budgeting & ratio analysis. Unlike that 100%, 83%, 67% and 33% companies were practicing annual budgeting, cash flow, responsibility accounting & activity based budgeting respectively. But long term budgeting, standard costing and zero base budgeting were not used at all.

Therefore, it was found that annual budgeting was practiced by almost all the sampled companies. Cash flow and responsibility accounting were mostly practiced than other tools.

**Table-4.2**

**Base for Not Practiced Management Accounting Tools in PTC's of Nepal**

S.N.	Tools	No. of Respondents	No. of Practitioner	%
1	Lack of Expertise	6	2	33
2	High cost	6	1	17
3	No Information about the Tools	6	2	33
4	Others	6	1	17

Table 4.2 shows reasons for not practicing MA tools in PTC's of Nepal. The rating made for lack of expertise and no information about the tools was 33% and 33% responses. The high cost and others receive 17% response.

**Table-4.3****Method of Segregating Mixed Cost into Fixed and Variable in PTC's of Nepal**

S.N.	Tools	No. of Respondents	No. of Practitioner	%
1	High-Low Point Method	6	-	-
2	Regression Method	6	-	-
3	Average Method	6	5	83
4	Analysis Method	6	1	17
5	Other	6	-	-

Table-4.3 shows the practice followed in segregating mixed cost into fixed and variable in PTC's of Nepal out of the sampled companies 83% and 17% used average method and analysis method respectively. None of the PTC's of Nepal practiced high-low point method and regression method.

**Table-4.4****Base for Budget preparation in PTC's of Nepal**

S.N.	Tools	No. of Respondents	No. of Practitioner	%
1	Past Budget Estimates	6	2	33
2	Based on Past Actual Expenses/Historical Expenses	6	4	67
3	Zero Base Budgeting	6	-	-
4	Activity Based Budgeting	6	2	33
5	Other	6	-	-

Source: Field Survey

Table-4.4 shows the base for budget preparation in PTC's of Nepal. In total 33% companies practiced past budget estimates and activities based budgeting. 67% companies used to prepare budget based on past actual expenses/ historical expenses. None of PTC's of Nepal practiced zero base budgeting. Therefore, mostly past actual expenses were base for budget preparation.

**Table- 4.5**  
**Budget Preparation System in PTC's of Nepal**

S.N.	Budget Prepared by	No. of Respondents	No. of Practitioner	%
1	Committee	6	4	67
2	Planning Department	6	4	67
3	Chief of Finance Division	6	4	67
4	Outside Experts	6	-	-
5	Other	6	-	-

Source: Field Survey

The above table-5 shows the budget preparation system practiced in PTC's of Nepal. It is clear that 67% companies practiced prepare budget by committee, planning department and chief of finance division respectively. None of PTC's of Nepal practiced preparation of budget by using outside experts. Therefore, committee, planning department and chief of finance division were mostly used in the preparation of budget.

**Table- 4.6**  
**Budget Practice in PTC's of Nepal**

S.N.	Types of Budget	No. of Respondents	No. of Practitioner	%
1	Cash budget only	6	2	33
2	Operational budget only	6	2	33
3	Master budget	6	4	67
4	Other	6	-	-

Source: Field Survey

Table- 4.6 shows the types of budget prepared in PTC's of Nepal. It is clear that 67% companies practiced master budget, 33% companies practiced cash budget only and operational budget only. Therefore, master budget was widely practiced by the sampled companies.

**Table- 4.7****Types of Budget Practiced on the Basis of Period in PTC's of Nepal.**

S.N.	Types of budget	No. of Respondents	No. of Practitioner	%
1	Short-Term Budget (1 year or less)	6	6	100
2	Medium Term Budget (3year)	6	-	-
3	Long Term Budget (5 year or more)	6	-	-
4	Other	6	-	-

Source: Field Survey

Table-4.7 shows the types of budget practiced in PTC's of Nepal. It is obvious that 100% companies practiced short-term budget (i.e. 1 year or less). None of PTC's of Nepal practiced medium term budget (i.e. 3 year) and long term budget (i.e. 5 year or more). Therefore, short term budget was practiced by almost all the companies.

**Table- 4.8****Practice for Pricing Product in PTC's of Nepal**

S.N.	Pricing Technique	No. of Respondents	No. of Practitioner	%
1	Variable cost pricing	6	1	17
2	Full cost pricing	6	3	50
3	Transfer cost pricing	6	3	50
4	Activity based cost pricing	6	1	17
5	Other	6	-	-

Source: Field Survey

Table-4.8 shows the product pricing technique practiced in PTC's of Nepal. It is clear that 50% of PTC's of Nepal practiced full cost pricing and transfer cost pricing. But 17% companies practiced variable cost pricing and activity base cost pricing respectively. Therefore, full cost pricing and transfer cost pricing were practiced the majority of the sampled companies.

**Table- 4.9**  
**Pricing of Inventory practiced in PTC's of Nepal**

S. N	Technique/ Method	Perpetual			Periodic		
		No. of Respondents	No. of Practitioner	%	No. of Respondents	No. of Practitioner	%
1	LIFO	6	-	-	6	1	17
2	FIFO	6	3	50	6	1	17
3	Weighted Average	6	2	33	6	2	33
4	Specific items	6	1	17	6		
5	Others	6	-	-	6	-	-

Source: Field Survey

Table-4.9 shows the pricing of inventory practiced in PTC's of Nepal. It is obvious that 33% companies practiced weighted average for perpetual as well as periodic. But 50% companies practiced FIFO for perpetual. 17% companies practiced FIFO and LIFO for periodic only. 17% companies practiced specific items only for perpetual. None of PTC's of Nepal practiced specific items for periodic and LIFO for perpetual. Therefore, FIFO was widely used method for pricing of inventory in PTC's of Nepal.

**Table-4.10**  
**For Cost and Revenue Estimation practice in PTC's of Nepal**

S. N.	Cost and Revenue Estimation Technique	No. of Respondents	No. of Practitioner	%
1	Past trend analysis	6	5	83
2	Zero base budgeting	6	-	-
3	Market Survey	6	3	50
4	Judgmental analysis	6	2	33
5	Other	6	-	-

Source: Field Survey

Table- 4.10 shows the practice of cost and revenue estimation in PTC's of Nepal. It is obvious that 83% of PTC's of Nepal practiced past trend analysis. 50% companies

practiced market survey and 33% companies practiced judgmental analysis. None of PTC's of Nepal practiced zero base budgeting. Therefore, past trend analysis was mostly practiced than market survey as well judgmental analysis to cost & revenue estimate of PTC's of Nepal.

**Table- 4.11**

**Capital Budgeting or Long Term Investment Decision practiced in PTC's of Nepal**

S.N	Tools	No. of Respondents	No. of Practitioner	%
1	Payback period	6	2	33
2	Average rate of return	6	1	17
3	Net present value	6	2	33
4	Internal rate of return	6	2	33
5	Profitability Index	6	1	17
6	Modified Internal rate of return	6		
7	Other	6	-	-

Table- 4.11 shows the capital budgeting or long term investment practiced decision in PTC's of Nepal. It is clear that 33% of PTC's of Nepal practiced payback period, net present value and internal rate of return while 17% company practiced average rate of return and profitability index tools. None of PTC's of Nepal practiced modified internal rate of return.

Therefore from the above table it was clear that payback period, net present value and internal rate to return mostly practiced tool of capital budgeting.

**Table- 4.12**  
**Basis for Alternative Decision Practiced in PTC's of Nepal**

S.N.	Base	No. of Respondents	No. of Practitioner	%
1	Quotation process	6	5	83
2	Special order decision	6	3	50
3	Tender process	6	6	100
4	Lease or purchase decision	6	2	33
5	Other	6	-	-

Source: Field Survey

Table-4.12 shows the alternative decision making practiced in PTC's of Nepal. It is clear that 100% of PTC's of Nepal practiced tender process. 83% companies practiced quotation process. 50% and 33% companies practiced special order decision and lease or purchase decision respectively. Therefore, tender process was widely practice than others process while big financial activities. Quotation process was practiced when small financial activities for daily official used.

**Table-4.13**  
**Risk Adjustment practice used while Evaluating Capital Investment in PTC's of Nepal**

S.N.	Tools	No. of Respondents	No. of Practitioner	%
1	Sensitivity analysis	6	1	17
2	Required rate of return	6	3	50
3	Short payback period	6	2	33
4	Higher IRR	6	2	33
5	Estimated for cash flow basis	6	2	33
6	Others	6	-	-

Source: Field Survey

Table-4.13 shows Risk adjustment practice used while evaluating capital investment in PTC's of Nepal. It is clear that 17% of PTC's of Nepal practiced sensitivity analysis while 50% companies practiced required rate of return and 33% companies short

payback period, higher IRR and estimated for cash flow basis respectively. Therefore, require rate of return was widely used than others.

**Table- 4.14**

**Tools used for evaluation of overall performance at the end of the accounting year in PTC's of Nepal**

S.N	Tools Practiced	No. of Respondents	No. of Practitioner	%
1	P/L made by company	6	6	100
2	Budgetary control	6	1	17
3	Standard costing (Estimation of cost Limit)	6		
4	Ratio analysis	6	1	17
5	Cash flow analysis	6	2	33
6	Activity based casing	6	1	17
7	Other	6	-	-

Source: Field Survey

Table- 4.14 shows the tools used for evaluation of overall performance at the end of the accounting year in PTC's of Nepal. It is clear that 100% companies practiced profit & loss account tool. 33% companies practiced cash flow analysis while 17% company practiced budgetary control, ratio analysis and activity based costing respectively. None of PTC's of Nepal practiced standard costing (i.e. estimation of cost limit) because they are trading house.

Therefore, Profit & loss criteria was mostly practiced and used in PTC's of Nepal than other tools.

**Table-4.15**

**Practice of Management Accounting Function in PTC's of Nepal**

S.N.	Management, Accounting Function	No. of Respondents	No. of Practitioner	%
1	Stewardship	6	2	33
2	Treasureship	6	1	17
3	Controllership	6	5	83
4	Other	6	-	-



The above table- 4.15 shows the practice of management accounting functions in PTC's of Nepal. It is clear that 83% companies practiced controllership function. 33% and 17% companies practiced stewardship and treasureship functions which are below average. Therefore, controllership function was widely practiced than other two function.

**Table 4.16**

**The main factor that affects the decision making process in PTC's of Nepal**

S.N	Main Factor	No. of Respondents	No. of Practitioner	%
1	Management accounting techniques	6	2	33
2	Government policy	6	5	83
3	Objective of the company	6	2	33
4	Discretion of the management	6	1	17
5	Other	6	-	-

Table- 4.16 shows the practice for the main factor that affects the decision making process in PTC's of Nepal. It is clear that 83% companies affected by government policy. 33% companies affected by management accounting technique and objective of the company respectively while 17% company affected by discretion of the management. Therefore, government policy was mostly affected than other factor.

**Table- 4.17**

**The Major Difficulties for the Application of Managerial Accounting Tools and Technique in PTC's of Nepal**

S.N.	Major difficulties	No. of Respondents	No. of Practitioner	%
1	Lack of Information	6	2	33
2	Size and Nature of Business	6	4	67
3	High Cost	6	1	17
4	Long Procedure	6	2	33
5	Specific no Policy for Implementation	6	3	50
6	Other	6	-	-

Source: Field Survey

Table- 4.17 shows the major difficulties in application of Management Accounting tools & technique in PTC's of Nepal. It is clear that 33% PTC's of Nepal faced by lack of information, 67% PTC's faced by size & nature of business, 17% PTC's faced by high cost while 33% PTC's faced by long procedure and 50% companies faced by specific no policy for implementation. Therefore, size & nature of business and specific no policy for implementation was mostly major difficulties for the application of MA tools & techniques than other difficulties.

### 4.3 Hypothesis Test

#### Hypothesis 1

**Null Hypothesis.  $H_0$ :** There is no significant relationship between the use of cost segregation into fixed & variable and profit & loss account, (Use of cost segregation into fixed & variable and profit & loss account are independent)

**Alternative Hypothesis.  $H_1$ :** There is significant relationship between the use of cost segregation into fixed & variable and profit & loss account. (Use of cost segregation into fixed & variable and profit was account are dependent)

**Solution:**

#### 2x2 Contingency Table

##### Practicing Management Accounting Tools

Management Accounting Tools	Yes	No	Row Total
Cost Segregation into Fixed & Variable	3 a	3 b	6 (a+b) $r_1$
Profit & Loss Account	6 c	0 d	6 (c+d) $r_2$
Column Total	9 (a+c) $c_1$	3 (b+d) $c_2$	12 N

Since cell frequency is less than 5, therefore by applying Yates correlation for calculating  $\chi^2$ . For this, add 0.5 to cell frequency which is less than 5 and adjust the remaining frequency by fixing row total and column total. Thus, adjusted 2x2 contingency table is presented in the following table.

### 2x2 Contingency Table

#### Practicing MA tools

MA Tools	Yes	No	Row Total
Cost Segregation into Fixed & Variable	3.5    a	2.5    b	6 (a+b) r <sub>1</sub>
Profit & Loss Account	5.5    c	0.5    d	6 (c+d) r <sub>2</sub>
Column Total	9 (a+c) c <sub>1</sub>	3 (b+d) c <sub>2</sub>	12    N

#### Calculation of $\chi^2$

O	$E = \frac{RT \times CT}{N}$	O-E	(O-E) <sup>2</sup>	$\frac{(O-E)^2}{E}$
3.5	4.5	-1	1	0.22
2.5	1.5	1	1	0.67
5.5	4.5	1	1	0.22
0.5	1.5	-1	1	0.67
				$\sum \frac{(O-E)^2}{E} = 1.78$

Test statistics under H<sub>0</sub> is,

$$\chi^2 = \sum \frac{(O-E)^2}{E} = 1.78$$

Where,

$\chi^2$  = chi-square test

O = Observed Frequency

E = Expected frequency

The Calculated Value of  $\chi^2 = 1.78$

Tabulated Value : d.f. = (r-1) (c-1) = (2-1) (2-1) = 1

Level of significance ( $\alpha$ ) = 5%

Where,

d.f. = degrees of freedom

Tabulated value of  $\chi^2$  at 5% level of significance for 1 d.f. is 3.84

**Result**

Sine the calculated value of  $\chi^2$  1.78 is less than the tabulated value of  $\chi^2$  at 5% level of significance for 1 d.f. is 3.48, the null hypothesis  $H_0$  is accepted and hence the alternative hypothesis  $H_1$  is rejected. It means that use of cost segregation into fixed & variable and profit & loss account are independent.

**Hypothesis 2**

**Null Hypothesis.  $H_0$ :** There is no significant relationship between the use of payback period and net present value. (Use of payback period and net present value are independent)

**Alternative Hypothesis.  $H_1$ :** There is significant relationship between the use of payback period and net present value. (Use of payback period and net present value are dependent)

**Solution:**

**2x2 Contingency Table**  
**Practicing Capital Budgeting Tools**

<b>Capital Budgeting Tools</b>	<b>Yes</b>	<b>No</b>	<b>Row Total</b>
Payback Period	2      a	4      b	6 (a+b) $r_1$
Net Present Value	2      c	4      d	6 (c+d) $r_2$
Column Total	4 (a+c) $c_1$	8 (b+d) $c_2$	12      N

Since cell frequencies is less than 5, therefore by applying Yates correlation for calculating  $\chi^2$ . For this add 0.5 to cell frequency which is less than 5 and adjust the remaining frequency by fixing row total and column total. Thus, adjusted 2x2 contingency table is presented in the following table.

**2x2 Contingency Table**  
**Practicing Capital Budgeting Tools**

<b>Capital Budgeting Tools</b>	<b>Yes</b>	<b>No</b>	<b>Row Total</b>
Payback Period	2.5      a	3.5      b	6 (a+b) $r_1$
Net Present Value	1.5      c	4.5      d	6 (c+d) $r_2$
Column Total	4 (a+c) $c_1$	8 (b+d) $c_2$	12      N

**Calculation of  $\chi^2$**

O	$E = \frac{RTxCT}{N}$	O-E	$(O-E)^2$	$\frac{(O-E)^2}{E}$
2.5	2	0.5	0.25	0.125
3.5	4	-0.5	0.25	0.0625
1.5	2	-0.5	0.25	0.125
4.5	4	0.5	0.25	0.0625
				$\sum \frac{(O-E)^2}{E} = 0.375$

Test Statistics under  $H_0$  is,

$$\chi^2 = \sum \frac{(O-E)^2}{E} = 0.375$$

Where,

$\chi^2$  = Chi-square test

O = Observed frequency

E = Expected frequency

The Calculated Value of  $\chi^2 = 0.375$  Tabulated Value:

Level of significance ( $\alpha$ ) = 5%

Where,

d.f. = degrees of freedom

Tabulated value of  $\chi^2$  at 5% level of significance for 1 d.f. is 3.84

### Result

Since the calculated value of  $\chi^2$  0.375 is less than tabulated value of  $\chi^2$  at 5% level of significance for 1 d.f. is 3.48, the null hypothesis  $H_0$  is accepted and hence the alternative hypothesis  $H_1$  is rejected. It means that use of payback period and net present value are independent.

**Hypothesis 3**

**Null Hypothesis  $H_0$ :** There is no significant relationship between the use of Break-even analysis and cash flow analysis. (Use of Break-even and analysis and cash flow analysis are independent)

**Alternative Hypothesis  $H_1$ :** There is significant relationship between the use of break-even analysis and cash flow analysis. (Use of break-even analysis and cash flow analysis are dependent)

**Solution:**

**2x2 Contingency Table****Practicing Management Accounting Tools**

MA Tools	Yes	No.	Row Table
Break-even analysis	3 a	3 b	6 (a+b) $r_1$
Cash Flow Analysis	5 c	1 d	6 (c+d) $r_2$
Column Total	8 (a+c) $c_1$	4 (b+d) $c_2$	12 N

Since cell, frequencies are less than 5 or equal to 5, therefore by applying Yates correlation for calculating  $\chi^2$ . For this, add 0.5 to cell frequency which is less than 5 and adjust the remaining frequency by fixing row total and column total. Thus, adjusted 2x2 contingency table is presented in the following table.

**2x2 Contingency Table****Practicing Management Tools**

MA Tools	Yes	No.	Row Table
Break-even analysis	3.5 a	2.5 b	6 (a+b) $r_1$
Cash Flow Analysis	4.5 c	1.5 d	6 (c+d) $r_2$
Column Total	8 (a+c) $c_1$	4 (b+d) $c_2$	12 N

### Calculation of $\chi^2$

O	$E = \frac{RT \times CT}{N}$	O-E	(O-E) <sup>2</sup>	$\left(\frac{O-E}{E}\right)^2$
3.5	4	-0.5	0.25	0.0625
2.5	2	0.5	0.25	0.125
4.5	4	0.5	0.25	0.0625
1.5	2	-0.5	0.25	0.125
				$\sum \frac{(O-E)^2}{E} = 0.375$

Test Statistics under  $H_0$  is,  $\chi^2 = \sum \frac{(O-E)^2}{E} = 0.375$

Where,

O = Observed Frequency

E = Expected Frequency

The calculated value of  $\chi^2 = 0.375$

Tabulated Value

d.f. = (r-1) (c-1) = (2-1) (2-1) = 1

Level of Significance ( $\alpha$ ) = 5%

Tabulated value of  $\chi^2$  at 5% level of significance for 1 d.f. is 3.84

### **Result**

Since the calculated value of  $\chi^2$  0.375 is less than tabulated value of  $\chi^2$  at 5% level of significance for 1 d.f. is 3.48, the null hypothesis  $H_0$  is accepted and hence the alternative hypothesis  $H_1$  is rejected. It means that use of Break-even analysis and cash flow analysis are independent.

### **Hypothesis 4**

**Null Hypothesis  $H_0$ :** There is no significant relationship between the use of Budget Annual and Ratio analysis. (Use of Annual Budgeting and Ratio analysis is independent)

**Alternative Hypothesis H<sub>1</sub>:** There is significant relationship between the use of Budget Annual and Ratio analysis. (Use of Annual Budgeting and Ratio analysis is dependent)

**Solution:**

### 2x2 Contingency Table

#### Practicing Management Accounting Tools

MA Tools	Yes	No.	Row Table
Annual Budgeting	6 a	0 b	6 (a+b) r <sub>1</sub>
Ratio Analysis	3 c	3 d	6 (c+d) r <sub>2</sub>
Column Total	9 (a+c) c <sub>1</sub>	3 (b+d) c <sub>2</sub>	12 N

Since the cell frequencies are less than 5 or equal to 5, therefore by applying Yates correlation for calculating  $\chi^2$ . For this, add 0.5 to cell frequency which is less than 5 and adjust the remaining frequency by fixed row total and column total. Thus, adjusted 2x2 contingency table is presented in the following table.

### 2x2 Contingency Table

#### Practicing MA Tools

MA Tools	Yes	No.	Row Table
Annual Budgeting	5.5 a	0.5 b	6 (a+b) r <sub>1</sub>
Ratio Analysis	3.5 c	2.5 d	6 (c+d) r <sub>2</sub>
Column Total	9 (a+c) c <sub>1</sub>	3 (b+d) c <sub>2</sub>	12 N

#### Calculation of $\chi^2$

O	$E = \frac{RT \times CT}{N}$	O-E	(O-E) <sup>2</sup>	$\left(\frac{O-E}{E}\right)^2$
5.5	4.5	1	1	0.2222
0.5	1.5	-1	1	0.6667
3.5	4.5	-1	1	0.2222
2.5	1.5	1	1	0.6667
				$\sum \frac{(O-E)^2}{E} = 1.7778$



Test Statistics Under  $H_0$  is,  $\chi^2 = \sum \frac{(O-E)^2}{E} = 1.7778$

Where,

O = Observed Frequency

E = Expected Frequency

The calculated value of  $\chi^2 = 1.7778$

Tabulated Value

d.f. = (r-1) (c-1) = (2-1) (2-1) = 1

Level of Significance ( $\alpha$ ) = 5%

Tabulated value of  $\chi^2$  at 5% level of significance for 1 d.f. is 3.84

### **Result**

Since the calculated value of  $\chi^2$  1.7778 is less than tabulated value of  $\chi^2$  at 5% level of significance for 1 d.f. is 3.48, the null hypothesis  $H_0$  is accepted and hence the alternative hypothesis  $H_1$  is rejected. It means that use of Annual Budgeting and Ratio Analysis are independent.

### **4.4 Major Findings**

On the basis of comprehensive analysis of the available data, the following findings were drawn.

1. This study on MA tools practiced in PTC's of Nepal for planning, controlling and decision making process found that annual budget cash flow and responsibility accounting were mostly practiced. The annual budget was practiced by 100% PTC's of Nepal whereas 83% companies practiced cash flow and 67% companies practiced responsibility accounting. 50% companies practiced cost segregation into fixed & variable, break even analysis, capital budgeting ratio analysis respectively. Activity based budgeting was practiced by 33% companies. Budgeting long-term, zero base budgeting and standard costing tools were not practiced in PTC's of Nepal.
2. The reasons for not practicing MA tools were lack of expertise, high cost, on information about the tools and others. The lack of expertise and no information about tools accounted for 33% whereas 17% company did not practice because of high cost and others.
3. The average method and analysis methods were practiced for cost segregation into fixed & variable by 83% and 17% PTC's of Nepal. High-low point method and

regression method were not used to practice in PTC's of Nepal for Segregating mixed cost into fixed & variable.

4. The past actual expenses of historical expenses were the basis used for preparation of budget. It recorded 67% of PTC's of Nepal. But only 33% PTC's of Nepal prepared budget on the basis of past budget estimates and activity based budgeting. Zero base budgeting was not practiced because of government policy as well discretion of the management.
5. The committee, planning department and chief of finance division rating 67% of PTC's of Nepal used to prepare budget. However, outside experts was not taken for budget preparation.
6. Types of budget practiced in PTC's of Nepal were cash budget only, operational budget only and master budget. Almost 67% PTC's of Nepal practiced master budget while 33% prepared cash budget only and operational budget only. Most of PTC's of Nepal practiced master budget to carryout operational activities.
7. Regarding types of budget practiced in PTC's of Nepal, it was found that 100% PTC's of Nepal prepared short-term budget. It was also found that medium term budget and long term budget were not prepared.
8. The full cost pricing and transfer cost pricing were adopted by 50% of PTC's on Nepal. Variable cost pricing and activity based cost pricing were practiced by 17% of PTC's of Nepal which was below average.
9. The FIFO pricing of inventory in PTC's of Nepal, was used by 50% & 17% of the companies used FIFO for perpetual and periodic respectively. Weighted average was used by 33% of the companies by perpetual as well as periodic. LIFO was used by 17% of the companies for periodic. Specific items were used by 17% of the companies for perpetual.
10. The cost and revenue estimation was used by 83% of PTC's of Nepal on the basis of past trend analysis. 50% and 33% companies made it on the basis of market survey and judgmental analysis respectively. Zero base budgeting was not practiced by PTC's of Nepal.
11. The capital budgeting or making long-term investment was used by PTC's of Nepal. The payback period, net present value and internal rate of return respectively were used by 33% of PTC's of Nepal. But 17% companies practiced average rate of return and profitability index respectively. Modified internal rate of return was not practiced by PTC's of Nepal

12. Tender process was followed by 100% of PTC's of Nepal. But 83%, 50% & 33% companies followed quotation process, special order decision and lease or purchase decision respectively. Tender process, was widely used because of government policy and provision made in law for considerable financial investment.
13. For practice of risk adjustment while evaluating capital investment in PTC's of Nepal, 50% companies practiced required rate of return. 33% companies practiced short payback period, higher IRR and estimated for cash flow basis respectively. 17% companies practiced sensitivity analysis tools.
14. The overall performance at the end of the accounting year was used by 100% of PTC's of Nepal taking the reference of profit & loss account. 17% companies practiced budgetary control, ratio analysis and activity based costing. 33% companies practiced cash flow analysis. The standard costing (estimation of cost limit) was not practiced-
15. The controllership functions were performed by 83% of PTC's of Nepal. 33% and 17% companies practiced stewardship and treasurership respectively.
16. Out of the total respondents, 83% felt that the affected the decisions making process. But 33% felt that management accounting techniques and objective of the company and 17% felt that the by discretion of the management affect the decision making process.
17. The size and nature of business was taken as major difficult for the application of managerial accounting tools and technique in PTC's of Nepal by 67% companies. 50% companies felt no specific Policy for implementation. 33% companies felt lack of information and long procedure. 17% company felt high cost.
18. The hypothesis test 1, revealed that PTC's of Nepal were independent in use of cost segregation into fixed & variable and profit & loss account. It means that there is no significant relationship between the use of cost segregation into fixed & variable and profit & loss account. The hypothesis test 2, revealed that PTC's of Nepal were independent in use of pay back period and net present value. It means that there is no significant relationship between the practicing of use period and net present value tools. The hypothesis test 3, revealed that PTC's of Nepal were independent in use of Break even analysis and Cash Flow analysis. It means that there is no. significance relationship between the uses of Break even analysis and Cash Flow analysis. . The hypothesis test 4, revealed that PTC's of Nepal were independent in use of Annual Budgeting and Ratio analysis. It means that there is no significant relationship between the use of Annual Budgeting and Ratio analysis.

## CHAPTER-V

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary

Management is concerned with planning, organizing directing and controlling for goal achievement through using limited resources in dynamic environment. Dynamic environment plays vital role for management for goal achievement. Dynamic environment creates ascertaining and risk which have opportunity as well as threats for organization. Accounting is the process of recording, classifying, analysis, and identifying and interpretation of business transaction in financial or monetary term. The main purpose of accounting is to ascertain the result and financial position of business activities of particular period. Thus, Management accounting is the study of managerial aspects of accounting. The accounting system which assists management in carrying out its functions more efficiently may be termed as management accounting. Management accounting is the process of identifying and communicating information for searching the goals of the company.

Managerial accounting is an integral part of management process and management accountant are important strategic partners in the companies' management team. Therefore, management accounting helps management to keep the minimizing losses and maximization of profit as well as getting others objectives.

In Nepal, Public enterprises consists various sector like manufacturing, trade, public utility, social-service and financial sector owned by government. State PEs are established for socio-economic development as well as good governance. So, the public enterprises have been assuming a vital role in the socio-economic development process of our country since the inception of the planning process. Their proper management is assumed further momentum in the present context of ecommerce, political and cultural changes in the country. As most of them were not performing well. In this study, only management accounting practice in public trade companies in Nepal are taken.

There are various Management Accounting tools and techniques, which can be applied for various types of companies. Such tools are, cost classification & estimation, cost allocation, profit print measurement & recognition, cost-volume profit planning & control, standard costing, pricing decision, statement of cash flow, Ratio analysis and long term investment decision.

The main objectives of this research study were to find out the present practices of Management accounting tools & techniques in public trade companies in Nepal. And other objective is to find out the reasons for non practicing the MA tools & techniques and difficulties faced in the application of MA tools in public trade companies in Nepal.

As per the nature of study, survey type research design was used. Surveys of Six public trade companies in Nepal were made through questionnaires. Seventeen tick marks questionnaires were distributed as well as discussions were made to get valuable information and data. Information was tabulated, analysis, interpreted as per the requirement of the study. Simple percentage tool has been applied to analyze and interpret of findings. The statistical tools chi-square ( $\chi^2$ ) was used to test the hypothesis related test.

## **5.2 Conclusion**

This research study showed different types of management accounting tools & techniques not applied in the public trade companies in Nepal. The management accounting tools are cost segregation, break-even analysis, budgeting annual, responsibility accounting, capital budgeting, ratio analysis, cash flow, activity based budgeting. But these tools were not fully practiced by public trade companies in Nepal. Annual budgeting, income statement, cash flow and responsibility accounting were practices.

The non-practicing tools were zero base budgeting; activity based costing, standard costing. Similarly, long-term budgeting, medium term budgeting, cost segregations high low point and least square method were non-practiced.

In public trade companies in Nepal, practices of hiring outside experts for practicing Management accounting tools and techniques for conduct various course of action (i.e., planning, controlling and decision making) were almost nil. Lack of information nature and size of business and cognizance about the MA tools and techniques were the main factors causing problem in application of such MA tools & techniques. From the hypothesis tests, it was clear that PTC's were independently practices the Management Accounting tools & techniques. It means that, Management Accounting tools & techniques are independent among them in PTC's in Nepal.

### 5.3 Recommendations

Management accounting is a new subject. It is still in a developing stage in the context of Nepalese corporate companies. This study showed that the present practice of Management Accounting tools and techniques were traditional stage. If any organization follow properly Management Accounting tools & techniques for managerial adjustment in the utilization of limited resources, that would definitely show better performance. So, the following recommendations are made based on findings of this study.

1. Management should use MA tools and technique for planning, controlling and decision making process. For planning process the tools like cost classification & estimation, cost allocation, profit measurement and recognition and budgeting for planning are recommended. For controlling process the tool like responsibility accounting, standard costing, overhead costing, flexible budgeting and budgetary control are recommended. For decision making process the tools like capital budgeting, environment analysis, resources analysis, cash flow analysis and pricing analysis can be used. To implement these courses of action, Management should establish separate Management accounting department.
2. Nepalese public trade companies are lack of expertise about Management accounting tools & techniques. Therefore, they should hire Management accounting experts. If not possible, they can send their existing employee for on the job training programmed period. If possible, it should take service from consultants. For information about the MA tools & technique, management should establish management accounting information system section in Management accounting department which also helps to manage the different other issues.
3. In cost segregation into fixed and variable, Average method was widely used. It is recommended to use other method such as high- low point method analysis method as well as least square method.
4. For budget preparation, Nepalese public trade companies were practicing based on the basis of past actual expenses and past budget estimates. Those are method because past will not happen in future. So, it is recommended to use zero base budgeting, activity based budgeting for budget preparation.

5. The budget in, Nepalese public trade companies were found to prepare budget by committee, planning department and chief of finance division mostly. It is also recommended to take outside expert's service for budget preparation.
6. The budget in, Nepalese public trade companies were using or practicing overall master budget but those were not effectively implemented. So, it is recommended to implement effectively all the components of master budget.
7. Nepalese public trade companies were practicing only short term budget. So, they should practice medium term budget and long term budget to achieve their long term objectives.
8. Nepalese public trade companies should practice not only past trend analysis and market survey but also should practiced zero base budgeting, judgmental analysis and engineering analysis for cost and revenue estimation for the future period because these will help to achieve their goal.
9. While purchasing fixed assets or making long-term investment decision, Nepalese Public Trade companies should use net present value, internal rate of return and discounted payback period.
10. Nepalese public trade companies should practice not only full cost pricing and transfer cost pricing but also activity base cost pricing and variable cost pricing.
11. 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.

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## APPENDIX

### RESEARCH QUESTIONNAIRE

The questionnaires are baseline to conduct a research work entitled “Management accounting Practice in Public Trade Companies in Nepal” in partial fulfillment of the requirement for the Degree of Master of Business Studies (MBS). All the alternatives are equally important.

---

**Name of Company:**

**Department:**

**Address:**

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Please provide tick (✓) mark for the alternative or alternatives you have chosen.

***Q.1 Would you kindly tell which of the following mentioned management accounting tools for planning, controlling and decision making process are used in your trading company ?***

#### Management Accounting Tools

	Yes	No
a) Cost Segregation into Fixed	( )	( )
b) Break Even Analysis	( )	( )
c) Responsibility Accounting	( )	( )
d) Capital Budgeting	( )	( )
e) Ratio Analysis	( )	( )
f) Cash flow Analysis	( )	( )

***Q.2 If your trading company has not practiced any of the above mentioned management accounting tools, what might be the reasons?***

- a) Lack of Expertise .....
- b) High Cost .....
- c) No Information about the Tools .....
- d) If Any Other, Places Specify .....

**Q.3 Which segregation method of mixed cost does your trading company practiced?**

- a) High - low point method .....
- b) Regression method .....
- c) Average method .....
- d) Analysis method .....
- e) If Any Other, Please Specify .....

**Q.4 On what basis, does your trading company prepare budget?**

- a) Past budget estimates .....
- b) Based on past Actual Expenses/Historical Expenses .....
- c) Zero Base .....
- d) Activity Based .....
- e) If Any Other, Please Specify .....

**Q.5 Who prepares the budget in your trading company?**

- a) Committee .....
- b) Planning Department .....
- c) Chief of Finance Division .....
- d) Outside Experts .....
- e) If Any Other, Please Specify .....

**Q.6 What type of the budget does your trading company practice?**

- a) Cash Budget Only .....
- b) Operational Budget Only .....
- c) Master Budget .....
- d) If Any Other, Please Specify .....

**Q.7 What is the period covered by the budget used in your trading company?**

- a) Short-Term Budget (1 year or less) .....
- b) Medium-Term Budget (3 year) .....
- c) Long-Term Budget (5 year or more) .....
- d) If Any Other, Please Specify .....

**Q.8** *What technique does your trading company practice for pricing of products?*

- a) Variable Cost Pricing .....
- b) Full Cost Pricing .....
- c) Transfer Cost Pricing .....
- d) Activity Based Cost Pricing .....
- e) If Any Other, Please Specify .....

**Q.9** *Which method is followed in pricing of inventory (store) in your trading company?*

- |                                 | Perpetual | Periodic |
|---------------------------------|-----------|----------|
| a) LIFO                         | .....     | .....    |
| b) FIFO                         | .....     | .....    |
| c) Weighted Average             | .....     | .....    |
| d) Specific Items               | .....     | .....    |
| e) If Any Other, Please Specify | .....     | .....    |

**Q.10** *Which technique does the trading company practice for cost and revenue estimation?*

- a) Past Trend Analysis .....
- b) Zero Base Budgeting .....
- c) Market Survey .....
- d) Judgmental Analysis .....
- e) If Any Other, Please Specify .....

**Q.11** *While purchasing fixed assets or making long-term investment decision which of the following capital budgeting tools are practiced?*

- a) Pay Back Period .....
- b) Average Rate of Return .....
- c) Net Present Value .....
- d) Internal Rate of Return .....
- e) Profitability Index .....
- f) Modified Internal Rate of Return .....
- g) If Any Other, Please Specify .....

***Q.12 Which decision making alternatives are practiced in your trading company?***

- a) Quotation Process .....
- b) Special Order Decision .....
- c) Tender Process .....
- d) Lease or Purchase Decision .....
- e) If Any Other, Please Specify .....

***Q.13 Which methods your trading company follow for risk adjustment while evaluating Capital Investment?***

- a) Sensitivity Analysis .....
- b) Required Rate of Return .....
- c) Short Pay Back Period .....
- d) Higher IRR .....
- e) Estimated for Cash Flow basis .....
- f) If Any Other, Please Specify .....

***Q.14 How does your trading company evaluate overall performance at the end of the accounting year?***

- a) P/L made by Company .....
- b) Budgetary Control .....
- c) Standard Costing .....
- d) Ratio Analysis .....
- e) Cash Flow Analysis .....
- f) Activity Based Costing .....
- g) If Any Other, Please Specify .....

***Q.15 What function of Management Account do you expect in your trading company?***

- a) Stewardship .....
- b) Treasure ship .....
- c) Controllership .....
- d) If Any Other, Please Specify .....

***Q.16 Which of the main factor, do you feel that will effect the decision making process in your trading company?***

- a) Management accounting techniques .....
- b) Government Policy .....
- c) Objective of the Company .....
- d) Discretion of the Management .....
- e) If Any Other, Please Specify .....

***Q.17 What might be the major difficulties for the application of managerial accounting tools & techniques in your trading company?***

- a) Lack of Information .....
- b) Size & Nature of Business .....
- c) High Cost .....
- d) Long Procedure .....
- e) Specific No Policy for Implementation .....
- f) If Any Other, Please Specify .....

**Date:** \_\_\_\_\_ **Seal of Company**

**Signature:** \_\_\_\_\_

**Designation of Respondent:** \_\_\_\_\_

**Name (Not Compulsory):** \_\_\_\_\_