

**MANAGEMENT ACCOUNTING PRACTICES IN
TRADING PUBLIC ENTERPRISES IN NEPAL**

A Thesis

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DECLARATION

I hereby declare that this thesis entitled "**Management Accounting Practices in Trading Public Enterprises in Nepal**" submitted to the office of dean, faculty of management, Tribhuvan University is my original research work which is prepared as the partial fulfillment of the requirement for degree of Master of Business Studies (MBS) under the guidance and supervision of Mr. Shiva Prasad Poudel, thesis supervisor, Balkumari College, T.U.

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ABBREVIATION

ABC	=	Activity Based Costing
ABB	=	Activity Based Budgeting
ARR	=	Accounting Rate of Return Average
AV	=	Average
BNLtd	=	Bottlers Nepal Limited, Balaju
CVP	=	Cost Volume Profit Analysis
CZ	=	Central Zoo
DDC	=	Dairy Development Corporation
DLH	=	Direct Machine Hour
DMH	=	Direct Machine Hour
FY	=	Fiscal Year
HBTF	=	Harrisiddhi Brick and Tiles Factory
HCTL	=	Hetauda Cement Industry Limited
IRR	=	Internal Rate of Return
ITE	=	Illam Tea Estate
MA	=	Management Accounting
MCV	=	Material Cost Variance
MIRR	=	Modified Internal rate of Return
MOS	=	Margin of Safety
MMV	=	Material Mix Variance
MPV	=	Material Price Variance
MUV	=	Material Usage Variance
MYV	=	Material Yield Variance
NCO	=	Net Cash Outlay
NJVB	=	Joint Venture Banks of Nepal
NOC	=	Nepal Oil Corporation Limited
NPE	=	Nepalese Public Enterprises
NPV	=	Net Present Value

NTC	=	Nepal Telecommunication
PBP	=	Pay Back Period
PE	=	Public Enterprise
PI	=	Profitability Index
PPC	=	Profit Planning and Control
PTC's	=	Public Trade Companies
RBB	=	Rastriya Banijya Bank
SBPPNL	=	Sir Bhrkuti Pulp and paper Nepal Limited
TPV	=	Total Present Value
ZBB	=	Zero Base Budgeting

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 to 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. It has 0.03percent and 0.3percent 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. 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 15percent area of the country. The mountainous region stands in the middle part of country. This region stands in the height of 600 to 4887 meters from sea plain land. This region covers about 68 percent 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 percent of the nation. The most fertile land and dense forest are found in this region.

The economic structure of Nepal is mixed economy i.e. socialist and capitalist However, Nepal is an agriculture country where more then 80percent of the total production is dependent on agriculture sector. Agricultural is the backbone of our country as it is the major sources of employment. Nepal is a developing country with per capita in come about US \$ 220 an estimated 38 percent of population lives below the poverty line. Income distribution is highly skewed. The economy is agro-oriented with extensive survival 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 service 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 service 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 Backgrod

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 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 established new industries, especially in areas where they were designed for import substitution. The cement, diary, sugar cotton and cigarettes industries point helped a lot in import substitution. Nepal's three cement industries fulfilled over 80percent of internal demand. The two sugar factories supplied over 50percent 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 eighties, public enterprise 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 belief of state involvement. However, extensive poor performance of the public enterprises sector led the government to reorganize the need to established 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 on 1985 under the name of Nepal bank Ltd was established in the private sector on 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 country's PE's were built as turnkey projects under bilateral agreements and with the help of international donors.

In Nepal, the public enterprise 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 still 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, Birjung 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, medicine 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 basis 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 depend 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 programmers has proved to the ineffective. At present only thirty public companies are running.

1.2.2 Meaning and Definitions of TPE's

Public Enterprises are called by a variety of names, such as public understandings, state enterprises, nationalized industries, governmental undertakings, etc. They are commercial or public utility undertakings that are funded by government. Public enterprises may be defined as business enterprises that are in complete control and management of the government or that undertaking who's 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 base aim of public enterprises is to provide goods and services to the public at reasonable price through profit earning are not exclude but their primary objectives is social services. (Shrestha, 2006: 141-142)

A 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, manages and controlled by the government on behalf of the public at large. The government's investments in such enterprises are at least 51 percent. PE's is established to provide different kind of service to the people. Public enterprises are also known as state enterprises, 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 undertaking" Similarly in the word 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 entitles wholly or partly owned by central or sub- national governments." [Word 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 51percent or more to make an entity public enterprise" (Narayan, 1998:42)

1.2.3 Importance of TPEs

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 importance for establishing trade 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 agreement 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 development period and low rate of return. 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) **Balance 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 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:** TPE's is essential for supplying essential goods and services sufficiently at reasonable price to the people.
- (vi) **Generally Employment Opportunities:** The government is responsible for providing employment opportunities to its citizens.
- (vii) **Reducing economic inequalities:** TPEs is meant to remove economic inequalities. Due to private entrepreneur wealth and income concentrates in few industrialists. By establishing TPEs, there is possibility for the govt. to reduce inequalities of wealth and income among the people.
- (viii) **Establishment of Welfare – Oriented Society:** TPEs helps to establish welfare- oriented society. Private company work for increasing profit but TPEs does not work for making profit. Hence, adulteration, artificial scarcity, black marketing etc. are not done by TPEs.

1.2.4 Features of TPEs

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 and 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) Separate legal entity
- (viii) Essential goods and services

1.2.5 Objectives of TPEs

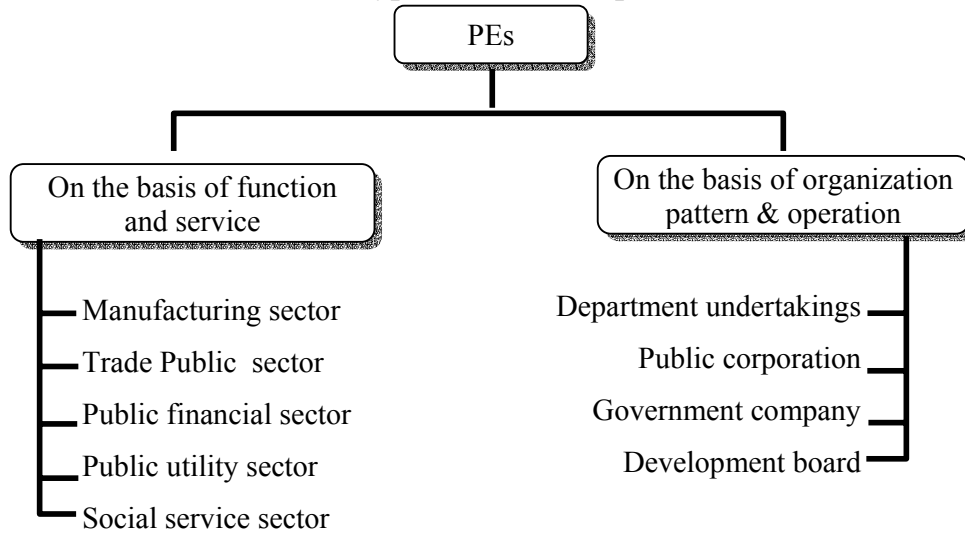
The major objectives underlying establishing TPEs were as follows.

- (i) To generate economic activities in the country as there was the absence of significant role play by the private sector.
- (ii) To available goods and service to general people at fair prices and good quality as well quantity.
- (iii) To create employment opportunities in the organized sector.
- (iv) To substitute import and save foreign exchange.
- (v) To develop economic and social infrastructure.

1.2.6 Types of TPEs in Nepal

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

Figure No. 1.1
Types of PEs in Nepal



1.2.6.1 On the Basis of Function and Service

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

- (i) **Manufacturing Sector:** Those companies who producer 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.
- (ii) **public trade sector:** those companies who doesn't produce good and only buy good then sales those good /products are called trade sector .for example, in Nepal food corporation ,salt trade corporation Ltd. agriculture inputs company ltd .are public trade sector .
- (iii) **Public financial sector:** those institutions that are concern to operate financial activities are called financial sector. For example, in Nepal; Nepal bank limited, ratriya banijya bank, ratriya beema sansthan etc. Are public financial sector.
- (iv) **Public utility sector:** those sectors whose operating is directly related to people utility is called public utility sector. in Nepal telecommunication

corporation .Nepal electricity authority and Nepal water supply corporation are public utility sector.

- (v) 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, television etc. are social service sector.

1.2.6.2 On the Basis of Organization Pattern and Operation

Public enterprises are four types on the basis of organization pattern and operation.

They are described as follows:

(i) Departmental Undertaking

It is the oldest method of operating 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 undertaking are conducted under the overall control of a minister concerned who is answerable regarding the affairs of the undertaking .it is under the overall 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 example of departmental undertakings in Nepal. The 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 are civil services
- No separate legal entity
- Public accountability

(ii) 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. 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

(iii) 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 percent of the total share capital. No special act is required to form government companies. Their liability is limited but their management is 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 has some features as follows.

- Incorporated under the company act.
- Created by Executive Decision

- Board of Directors
- Independent financial Management
- Recruitment of employees are not civil services
- Public Accountability

(iv) 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.

(i) 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 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)

(ii) 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

(iii) 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.

(iv) 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 labor 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, Provident Fund, Hetauda Industrial District, Nepalese Carpet (p.) Ltd, Paten 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.

(v) 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 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 Te 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.

(vi) 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 material and 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.

(vii) 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 enterprises, one from 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.

(viii) The Sixth Five Year Plan (1980-85)

The sixth plan had set the same objectives as in previous plan such as transfer of surplus labor 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 Oriented Magnitude 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.

(ix) 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 center was bifurcated into two separate institutions viz. Industrial District Management Ltd. and Economic Service Center. Likewise Nepal Television, Nepal Coal Limited, Nepal Bitumen & Bare Co. Engineering Consultancy, Nepal Housing Finance Development Ltd. was 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.

(x) 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 labor-intensive industries. In line with the policy of gradually privatizing the public enterprises, the government has handed over some to the public enterprise in private hand. The industrial enterprises Act 1992 and Industrial policy 1992 were introduced to enhance private sector participation. In addition, foreign Investment. And One-window policies 1992 were introduced to attract investment for smooth transfer of technology and speeding up industrial development. In this plan period, altogether 16 PEs were privatized.

(xi) The Ninth Five Year Plan (1997-2002)

The main objective of privation is to enhance productive uses of resources, in the high of economic, social and political realities of the country. Privation programmed 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.

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

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

(xii) 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;

- Emphasis on investor friendly environment for forward economic improvement by policy wise guarantee

- Provision of entry and drawback of private investment in the every sector economy by defining the role of private sector.
- Increase in competitive capacity by providing facilities and benefits to the investment sector.

Acceleration of privatization programmer effectively.

(xiii) 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 life of people by reducing poverty and existing employment and establishing sustainable peace. The target to reduce the people below poverty line form 31percent to 24percent as well employment growth rate from 3.0percent to 3.5percent and women participation will be 33percent for each sector. Poetry 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, 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 20th 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 reports ,Nepal Rastra Bank's report published articles .public trade companies have sufficient man, money , material technology, mechanism and information but they could not makes full utilization of their resources as well as capacity .Therefore , they are 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 .MA 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 desire outcomes. If they are not practices, what might be the reason and what are the difficulties? Is political interferences are difficulties to practices MA tools and technique? Is lack of awareness concerning the MA tools and techniques? Is lack of Management accounting experts? If they are practice, which MA tools and techniques are mostly practicing and how they are practicing till now?

1.4 Objectives of the Study

The main objectives of this research study are as follows.

- (i) To find out the MA tools and techniques use in TPEs in Nepal.
- (ii) To identify planning, controlling and decision making process of TPEs in Nepal.
- (iii) To identify the management policy toward the MA tools and techniques.
- (iv) To identify the major difficulties in using MA tools and techniques in TPEs in Nepal.

1.5 Research Hypothesis

Research hypothesis is an educated guess about the overcome of an empirical test designed to answer a research question. To make the research specific, precise and objective, hypothesis are tested related to the dependency and independency of PEs in practicing of MA tools and techniques .research hypothesis were set in research methodology.

1.6 Significance of the Study

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

- (i) It examines the application of MA tools & techniques in Public trade companies in Nepal.
- (ii) It is useful to the management of Public trade companies of Nepal for Making policy and strategies.
- (iii) It helps to know the MA tools & techniques in PTC's in Nepal.
- (iv) It provides guidelines to the researchers, who want to do further research in Management Accounting.
- (v) It examines the policy of govt. towards the MA tools & techniques.
- (vi) It helps to know the management accountants responsibility to provide reliable information for decision making.

1.7 Limitation of the Study

Each and every activity has some limitations. This research study has also some limitations.

- (i) The study was concentrated on MA tools & techniques in PTC's in Nepal but it does not show economic aspects.
- (ii) The study covered PTC's in Nepal. So the finding would not represent to other PEs and private companies in Nepal.
- (iii) The data and other information were collected through primary sources because this was survey type research.

1.8 Chapter Scheme

This research work was organized into five chapters.

(i) Introduction:

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

(ii) 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.

(iii) Research methodology

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

(iii) Presentation and Analysis of Data with findings

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

(iv) Summary, conclusion of Recommendation

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 sever as internal business consultants working side by side in cross- functional teams with managers from all area of the organization. In much organization, managerial accountants take on leadership role in their teams and are sought out for the valuable information they provide. They are treated as advisors. They are more that accountants; they are in fact very important business partners. (Bajtacharya, 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, 2005:4-4)

(i) Planning

Planning is process of thinking in advance about future activities. It is a forward thinking process that contemplates to manage the uncertainties and risk. is the 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.

(ii) 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 the available alternatives. The management team often comes across situations where decisions need to be taken considering the best interests of the organization.

(iii) 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 Steward, Treasureship and Controllership Functions of Management Accounting

(i) Stewardship Functions

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 they are less vigorous and detailed than the professional . It is usually applied to small business that does not need the more sophisticated techniques. Owing to the popularity and practice of company business of corporations, the stewardship function now is almost out of continuation. (Bajracharya, Ojha, Goet & Sharma, 2005:11)

(ii) Treasure Ship Function

Treasureship 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)

(iii) 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 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 MA tools and technique use to planning, controlling and decision making process for management goals. That tools and technique are listed under.

- (i) Cost classification & cost estimation
- (ii) Cost allocation
- (iii) Profit measurement & recognition
- (iv) Expenditure analysis
- (v) Budgeting for profit planning & control
- (vi) Pricing decision
- (vii) Long term investment decision
- (viii) Statement of cash flow
- (ix) Analysis of financial statement

2.4 Limitation of Management Accounting

Managing accounting suffers from some limitations which are mentioned below. (Dango,2007:13)

- (i) Management accounting is prepared on the basis of financial account and cost account. So its effectiveness is limited to the reliability of those sources.
- (ii) A management accountant should have the knowledge of accounting, statistics, economics; principle of management accounting will be useful. The imperfect knowledge of stated discipline may lead to erratic decisions.
- (iii) 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.
- (iv) The personal feeling and thinking of an interpreter may affect the decision making, which may lead to same wrong decision.
- (v) Management accounting may not be beneficial for small organization, because it is a very costly affair to install this system.
- (vi) Management accounting is still in evolutionary stage and it has not been able to reach the final stage.
- (vii) The establishment of management accounting demands re-arrangement of personal and their activities and hence there is a possibility of opposition from some quarters or the others within the organization.
- (viii) 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 organization goal and objectives. Management must use various tools and techniques of M.A 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 cost? 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 there by have total mixed cost for given level of activity. (Munaukarmi, 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 methods are such as Graphic method, high-low point method, Analytical method average method and least square method which is describes as follows.

(i) Graphical Methods (Scatter Diagram)

The graphical method of dividing mixed costs into their fixed and carious components makes use of all relevant past data pertaining to cost-volume relationship. The data are plotted in scatter graph. Each point in a chart represents cost for particular months/days in relation to number of units produced or level of activity. (Khan, 2000:5:11)

(ii) 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:

(iii) 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)

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

Where,

- a = Fixed cost per unit/paper
- b = Variable cost per unit
- N = No. of observations
- X = Activity measures
- Y = Total mixed cost

(iv) Analysis Method

This method also known as "Degree of variability" techniques because the genesis of this method lies in measuring the extent of variability of costs on a careful analysis of each item to determine how for the cost varies with volume, variable overheads under this method computed as follows: (Brown & Howard, 1964:49)

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

(v) Average Method

Under this method, total cost is divided by total units for find out cost per unit 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 heed 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.

(i) 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)

(ii) 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 the basis of production volume. (Gyawali, Fago & Subedi, 2006:3.3)

(iii) 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 some 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. (Homgren, 1991:38-39)

Product costs and period costs are calculated by the variables 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, Goet & Sharma, 2005:144)

2.5.4 Inventory System

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

(i) Perpetual Inventory System

Under a perpetual inventory, 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". (Gopal, 1992:689)

(ii) 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 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. There are describing as follows.

(i) First in First out (FIFO Method)

The FIFO method assumes that the items of inventor 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)

(ii) 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)

(iii) Weighted Average Method (End-of- the Months Average Cost Method)

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

(iv) 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 segregate for a specific project, regardless of whether they have been bough or produced. However, specific identification of costs id inappropriate when there are a large number of items that remain in inventories could be used to obtain predetermined on the net profit or loss for the period. (Bajracharya, Ojha & Sharma, 2005:174)

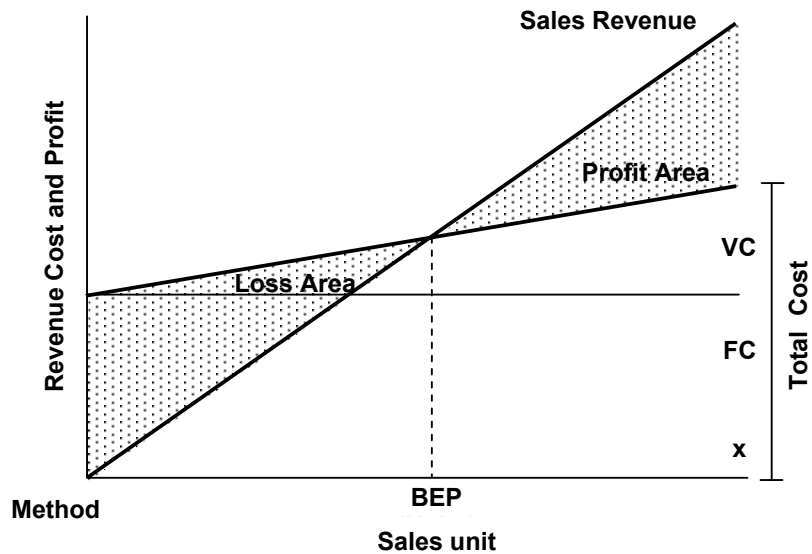
2.5.6 Managerial Application of the Cost-Volume Profit Analysis

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 helps the management to make strategies for success. However, CVP analysis used by some method/ approach which are described as follows.

(i) 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)

d. Graphical



(iii) Margin of Safety

Margin of safety (MOS) is a cushion available to a business firm to protect itself against the future business happenings. The large is the margin of safety the grater is the chances for the form 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 others words, it is the difference between actual or budgeted sales and break even sales. (Akshay, Goet & Bhattarai, 2005:12.4)

Symbolically,

$$\text{Margin of safety (MOS)} = \text{Actual sales Volume} - \text{BE sales Volume}$$

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

2.5.7 Pricing of the Product

Price is the value of goods and services . Setting price for goods or service in 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 is some technique for pricing of product which is described as follows:

(i) 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 Unit+(Mark Up%× total Variable Cost Per Unit)

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

Target profit = Capita employed × Return on investment (ROI)

(ii) 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 for determination of selling price. In long run, price must cover all cost and normal profit margin. Full cost pricing system covers all variable costs, fixed costs as well as required level of markup. It provides a just able price to tend 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)

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

$$\text{Target Profit} = \text{Capital Employed} \times \text{Return on Investment (ROI)}$$

(iii) Transfer Cost Pricing

A transfer price is the price on submit of an organization charges for products or services supplied to another submit of the same organization. The transfer price creates revenue for the selling submits and a purchase cost for the buying submit, affecting operation income numbers for both submits. The operating income can be used to evaluate the performance of each submit and to motivate managers. (Homgren, 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 transfer pricing
- d) General formula approach transfer pricing

(iv) 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 the causes them. The manufacturing costs are based up on certain costs drivers and the increasing 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, 2006:913)

2.5.8 Budgeting for Profit Planning and 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. 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 and 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 focus on operating of financial problems. Thus a budget is a tool that helps managers both plan and control operations. (Homgren, 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 with 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 submit. Budgets, basically, are furcated financial statements-formal expression of managerial plans. They are targets that encompass all phases of operations including sates, 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 essentially 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 and 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 the way those resources are used efficiently and effectively.
- To provide a means of measuring and controlling performance of individual unit and to supply information on the basis 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 twenty five year in the future, so, various plans are consideration for budgeting as described under.

(i) 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)

(ii) Tactical Short-Range Plan or Budget

Tactical short-range plan or budget is usually 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)

(iii) Medium Term Plans

A medium term planning is prepared for more than one year but more than 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 25 percent poverty alleviation target is the objective of interim budget.

2.5.8.5 The Budgeting Process

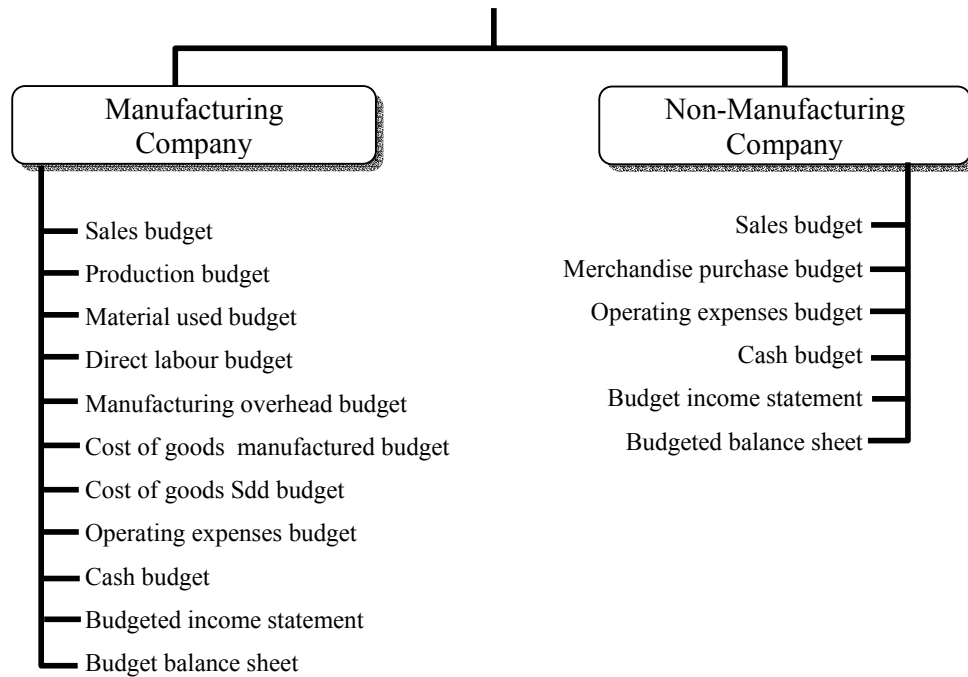
The main objectives of a business firm is to make to and excess of revenue over expenses so as to maximize profits. But is not a matter of dream or chance. There are no magic formulas of boosting the figure of profit overnight. Budgeting, if followed properly, can increase the chances of making profits within the given environment. A systematic budgeting should encompass the following procedures. (Bajracharya, Ojha, Goet & Sharma, 2005L349-350)

- (i) Evaluating the business environment
- (ii) Setting objectives
- (iii) Setting specific goals
- (iv) Identify potential strategies
- (v) Communicating the planning guidelines
- (vi) Developing the long-term and short term plans
- (vii) Implementation of budgets
- (viii) 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 and Non-manufacturing company has the following components.

Figure No. 2.1
Master Budgeting



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

2.5.8.7 Operational Budget

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

(i) Sales Budget

Sales budget is the starting point in the preparation of the comprehensive master budget. All the other plans and budget 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)

(ii) 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.

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

(iii) 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.

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

(iv) 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.

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

(v) Material Purchase Budget

Purchas budget is the process of determining the quantity of raw materials and to be purchase 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)

Material Purchase Budget = Material Usages + Closing Store of Raw Materials- Opening Stock of Raw Materials

(vi) 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.

Purchase Budget = Cost of Good Sold + Closing Stock- Opening Stock

Where,

Cost of Good Sold = Sales – Gross Margin

The purchase quantity should be dependent 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 & Gordern, 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 computer 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 recorder point.

Recorder point = Average usage × 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)

(vii) 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 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)

(viii) Direct Labour Budget

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

Direct labour cost = Production × Standards usage rate × Wage rate

(ix) Manufacturing Overhead Budget

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

(x) Cost of Goods Sold Budget

The cost of goods sold budget clearly distinguishes 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 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 goods sold includes the direct material, direct labour and the variable and the fixed manufacturing costs. (Bajracharya, Ojha, Goet & Sharma, 2005:379)

(xi) Operating Expenses Budget

Operating Expenses Budget represents 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)

2.5.8.8 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 budgets i.e. cash budget, budgeted income statement and budgeted balance sheet.

(i) 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 al type enterprises. The cash budget is a forecast of expected cash receipts and payments for future period. A cash budget shoes 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 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 labor 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 sections totals. If deficiency exists; the company will need to arrange for borrowed funds from its bank. If and 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)

(ii) Budget Income Statement

Planned income statement is concern 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)

(iii) Budgeted Balance Sheet

The balance sheet is the final document in the master budget and even in financial record keeping. It is concern 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 bases 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 involve.

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 ABB is to authorize the supply of only those resources those are need to perform activities required to meet the budgeted production and sales volume. Where as ABC assigns 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:

- (i) Estimate the production and sales volume by individual products and customers.
- (ii) Estimate the demand for organizational activities.
- (iii) Determine the resources that are required to perform organization activities.
- (iv) Determine the resources the quantity that must be supplied to meet the demand.
- (v) Take action to adjust the capacity of resources to match the projected supply. (Druru, 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 manager may prepare it for many level of activity. For performance evaluation, the flexible budget would be prepared at the 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 planed levels of activity. (Horngren, Sudern & Stratton, 1998:95)

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 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, and 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 change of business environment. (Gyawali, Fago & Subedi, 006:7.3)

The following methods are used for preparing a flexible budget.

(i) Tabular Method

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

- (i) Determination of level of activity
- (ii) Estimation of cost and its behavior for each level of activity
- (iii) Determination of units at the level of activates
- (iv) Preparation of flexible budget

(ii) Formula Format

This formula provides a formula for such expense account in each responsibility center. The formula gives the fixed amount and the variable rate. This in 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 express expenses budget in actual practice. In this 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. It therefore, involves a current, 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 an 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 o increased revenue 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 o fixed assets; and so on (Khan and Jain 2000:17.1)

The term capital budgeting is used to describe those actions relating to the planning and financing o 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 future even 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 through evaluation of the relative merits of every known alternative. (Garrison, 1976:456)

2.5.12.1 Estimating the Project's Cash Flows

Cash flows generally indicate 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 to the source of the cash. Estimation of the cash flows in an investment projects should cover following process.

- (i) Calculation of Net Cash Outlay(NCO)
- (ii) Calculation of Annual Depreciation
- (iii) Calculation of Annual Cash Flow After Tax(CFAT)
- (iv) 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.

(i) 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) Playback Periods)PBP)

The number of years required for the proposal cumulative cash flows to be equal to it are to its cash outflow is known as payback period. It can also be defined that the year required to cover its cost by it income. The project which provides its return I 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

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

Decision:

Accept if $\text{PBP} < \text{Maximum acceptable PBP}$

Reject if $\text{PBP} > \text{Maximum acceptable PBP}$

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 consider profitability rather than liquidity. According to this method the projects with higher rate of return is considered better projects than the lower rate 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.

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

Decision:

Accept if $\text{ARR} > \text{Minimum acceptable rate of return}$

Reject if $\text{ARR} < \text{Minimum acceptable rate of return}$

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

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

(ii) Discounted Cash Flow or Time Adjusted Methods

The discounted cash flow methods are theoretically 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 desire 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 o 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. (Homgren, Sundern & Stratton. 1998:415)

NPV= Total present value of annual cash flow- NCO

Decision

Accept if $NPV > 0$

Reject if $NPV < 0$

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

Mutually excusive 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 referred 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 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 computed by two methods 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

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

Where

LR = Lower rate

HR = Higher rate

NPV_{LR} = Net present value of lower rate

NPV_{HR} = Net present value of Higher rate

Decision:

Accept if $IRR >$ required rate 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 smaller 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 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 Uncertainly Under Capital Budgeting

Risk is only condition a decision maker may force uncertainly and risk describes the condition most financial manager face. Probability and statistics proved useful methods for describing such situations can be described as certainly. 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.

(i) 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 risky ness of the project depends upon the discount rate. If the discount rate is high, that project is considered as a highly risky 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 Rules:

- i. NPV should be positive by using the risk adjusted rates fro 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 Jain 1993)

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

Decision Rule

Higher the certainty equivalent co-efficient denotes lower the certainty equivalent co-efficient denotes higher risk. The 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 difficult 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 project depend upon the attitude of decision maker towards the risk.

(ii) 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 is evaluating capital budgeting proposal. The probability distribution of each flow 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 is analyzing risk in capital budgeting depends upon the behavior of the cash flows, from the points of view of behavioral cash being (a) Independent of (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 of 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 he 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 outcome is weighted in probabilistic terms and then evaluated. The DT approach is especially useful for situation in which decision at one point of time also affect the decision of the firm at some later data. Another useful application of the DT approach is for projects which require decision 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 impossible outcomes. The format of the exercise of the investment decision has an appearance of a tree with branches and there fore, 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 Deviation

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 guide to certain economic decision. (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 result with the planned objectives and determining where adjustment should be made. The management control process encompasses the following step. (Bajracharya, Ojha, Goet & Sharma, 2005:495-501)

Setting Standards

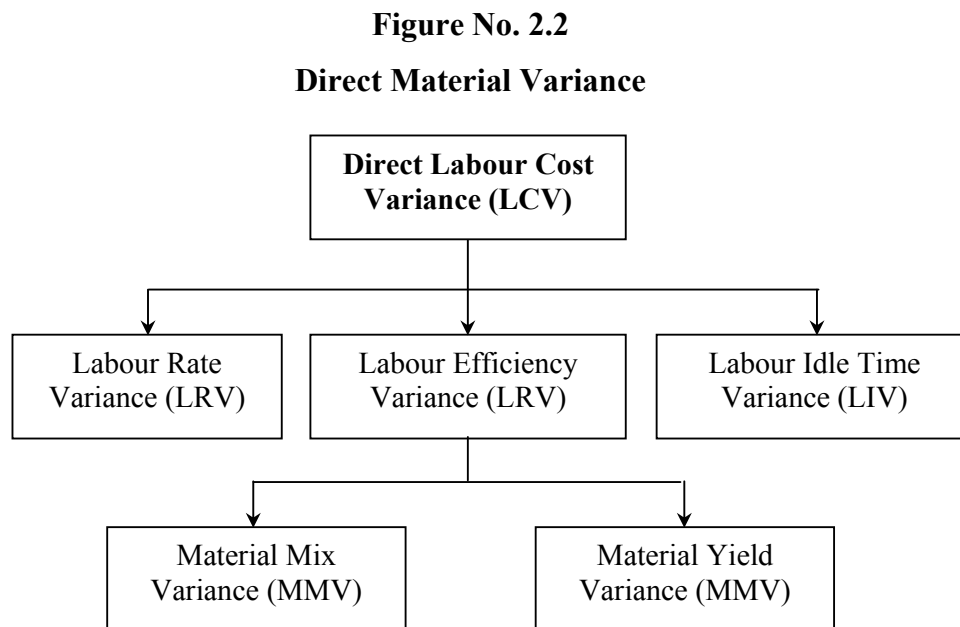
1. Actual performance measurement
2. Variance analysis
3. Computer variances for each reason
4. Point out the reason for variances
5. Corrective Action.

2.5.13.2 Variance Analysis

A variance is the different between standers 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 as certain and described in a way to indicate the causes leading to the various. 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)

(i) Direct Material Variance

Direct material variance 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.



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

- Material cost variance = $SQ \times Sp - AQ \times AP$
- Material Price Variance = $AQ(SP-AP)$
- Material Usages variance = $SP(SQ-AQ)$
- Material Mix Variance = $\frac{\text{Total Weight of AM}}{\text{Total Weight of SM}} \times (SC \text{ of SM}) - (SC \text{ of AM})$
- 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

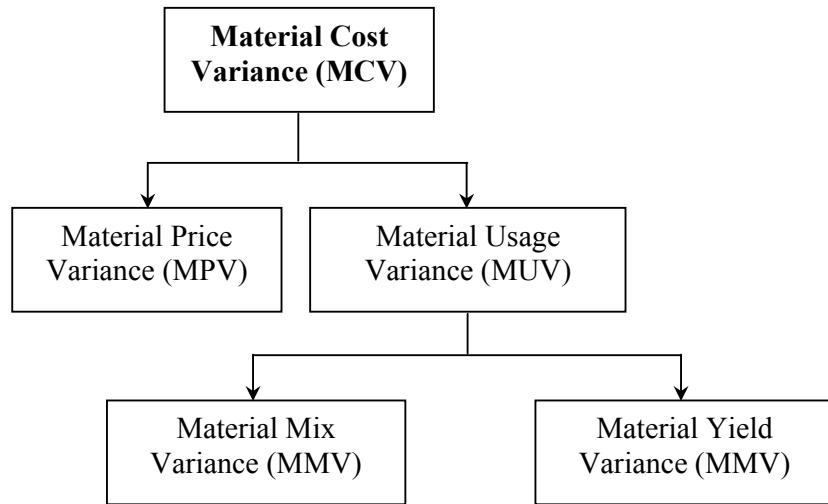
SC of M = Standard Cost of Standard Mix

SC of AM = Standard Cost of Actual Mix

(ii) **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 created 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. Labour efficiency variance is concerned with the variance of labour mix and labour yield variance. Labour variance can be shown as follows below.

Figure No. 2.3
Direct Labour Variance



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

- Labour Cost Variance := $ST \times SR - At \times AR$
- Labour Rate Variance = $-At (SR - AR)$
- Labour Efficiency Variance = $SR (ST - AT)$
- Labour Idle Time Variance = $Idle Time \times SR$
- Labour Mix Variance = $\left(\frac{Actual\ Labour\ Mix}{Std.\ Labour\ Mix} \times SC\ of\ SM \right) - SC\ of\ AM$
- 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 stander both provides the basic for comparison with the actual results. So , both management accounting technique can applied for performance reporting and maintaining the reward punishment system .There are some difference between budgeting control and standard as follows

- (i) 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 revenue of product or in rendering a service.
- (ii) Budgeting control seeks to keep in focus the total amount involved and total activity to be carried on. Stander costing provides control to be exercised in the cost of productions.
- (iii) Budgetary control is a projection of financial account while a standard costing is a projection of accounts.
- (iv) Budgetary control is generally applicable to all business organization while standard costing can be usefully applied in manufacturing concerns.
- (v) 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.
- (vi) 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)

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 function 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 in 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)

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 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 and segment managers. 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 in an organization are for decentralization, performance Evaluation motivation, transfer pricing, and drop or continue decision. (Bajracharya, Ojha, Goet and Sharma, 2005:480)

2.5.14.2 Process of Responsibility Accounting

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

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

2.5.15 Decision Making

Decision making is concerned with the future. It involves a choice between alternative; 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 for the future and is directed towards a specific objective or goal. In business, when evaluation alternative course of action, managers should select the alternative that provided the highest incremental benefit to the company. In some instance, all alternative 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 score 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.

2.5.15.1 Process of Decision Making

- The following are the steps involved in the process of rational decision making.
- Recognize and define the problem.
- Identify appropriate possible solutions to the problems.
- Evaluate selective alternatives
- Select the best alternatives
- Implement the selected alternative
- Evaluation and follow up

2.5.15.2 Types of Decision

(i) 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. Increase of loss or low profit from one or more,

management should taken 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 and etc. continuity of constant cost/fixed cost, department or traceable fixed cost, opportunity cost, effect on other product lines, responses of material suppliers and regular customer etc.

(ii) 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.

(iii) 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 from outright. Therefore, lesser is the agreement or document which transfer right of the owner (i.e. lesser) to the tenant (called lessee) in the exchange of the rent to be paid over the years to lesser. The document includes the right and duties a of lesser and lessee relating to the use of the property. It transfers the processing of property. It transfers the procession of property to the tenant for specific property. When the lease period is over, lease period can be renewed, or procession of the property can be return back to the lesser. 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)

(iv) 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, punjing machine, file, clip, whiteboard, plastics, pin, boxes etc. The firms can obtain these assets by quotation process. So, quotation process is also say for small financial activities.

(v) 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 incomes 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 "revenue" may be through of as the level of accomplishment attained by the company, while the "Expenses" 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 produced the revenue inflow.

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

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 (or 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 statement in assessing the solving, liquidity, and financial flexibility of the company. The fundamental relationship reported in a balance sheet is expressed by the classic accounting equation. (Bajracharya, Ojha, Goet & 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 fall set of financial statement. Cash flow statement provides relevant information about the cash receipts and cash payment 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, analysis, creditors, managers and others.

It shows how the accrual accounting information is covered into cash based information and arranges the information so that investors, analysis, creditors, manager and other can better understand the cash efforts of companies operating, investing and financing activities. The primary purpose 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 assets 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 statement 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:

- To help the financial manager to explain the situation of cash.
- To make easy to prepare cash budget for the specific period for future reference.
- To help know the causes of changes in the cash position on two dates.
- To help to evaluate the financial position of an organization.
- 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:

(i) Determination of Cash Flows from Operating Activities (Direct Method)

The direct method of cash flow converts its income statement from actual 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 change in working capital are also considered.

(ii) 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.

(iii) 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 amount 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 Statement Analysis

Stakeholders of a business firm perform several types of analysis 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.

(i) Common Size Statements

The analysis of common size statement 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. Analysis also uses 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 percentages 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)

(ii) Horizontal Trend Percent Analysis

Horizontal analysis is the analysis of financial statements over a series of years. Comparative financial statements present the same company's financial statements 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 deflects 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 over 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 express in quantitative form. When this definition of ratio is explained with reference to the items shows 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 others. 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.

(i) 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 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.

(ii) 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. The analysis contains the debt equity ratio and debt to total capital ratio.

(iii) Activity Analysis

To carry 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 investor turnover, daily sales outstanding, fixed assets turnover, total assets turnover and capital employed turnover ratios.

(iv) Profitable 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 consist 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 practice 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 (1989) had conducted a research on a topic “Profit planning is SRL Bhirkuti 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 researches 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 objectives and findings. The major objectives of his study were follows:

- To understand theoretical concept of profit planning.
- To examine and analyze the practise and effectiveness of profit planning in SBPPNL.
- To analyze the various functional budgets used by the company.

- To 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 programmes 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 Enterprises in Nepal. A case study of Nepal Oil Corporation Limited." Mr Bhattarai had mainly focused in 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. Bhattraai 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 objectives 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.

2.6.4 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 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 if 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 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 FY1993/94. 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 centred to urban areas only.
- No. of branches have been increasing each year.

2.6.6 Miss Pramita Dangol (2001) had conducted a research on the topic “Profit Planning in manufacturing public Enterprises; 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 and recommendations. Some remarkable findings were as follows:

- Specific goals and targets were not founds to be defined clearly to achieve the basic objectives of BN Ltd.
- There was lack off defined authority and responsibility. So there is no proper co-ordination 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.

2.6.7 Mr. Sagar Sharma (2002) had conducted a research on a topic “Management Accounting Practice 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 research, he had pointed out various objectives & findings, among those some remarkable objectives are as follow:

- To study and examine the present practise of management accounting tools in the listed companies of 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 collages, 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 practising 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 ht e membership of WTO, companies are recommended to apply management accounting tools of fit with the global environment.

2.6.8 Miss Kalpana Bhattarai (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 findings and recommendations. Some remarkable findings were as follows:

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

Some major findings were as follow:

- Budgets are prepared just to fulfil the formalities which are not used effectively for profit planning process.
- Long term and short term budgets are prepared but long term budget is confirmed 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 the depth because of the absence of the competitors.
- Lack of skilled planners and experts.
- Gap between actual productions and actual sales.

2.6.9 Mr. Bodh Raj Tripathy (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 FY2047/48 to FY2058/59. In his research, he had pointed out various findings and recommendations. 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 performances of the factory and the market price of the share of the factory.

Some major findings were as follow:

- HBTF Ltd. prepares functional budgets likes' 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 forecasting is ambitions. Actual sales are less than 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 positives 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.

2.6.10 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 findings and objectives. Some remarkable objectives were as follows:

- To study and examine the present practice of management accounting tools in public enterprises in Nepal.
- To identify the areas where management accounting tools in 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 collages, are not found applied by Public Enterprises.
- Management Accounting is help to managers to formulate organizational strategies as well as policy. PE’s as practising MA tools such as Capital Budgeting, Annual Budgeting, Cash Flow and Ratio Analysis. And not practising MA tools such as zero Based Budgeting, Activity Based Budgeting, Activities Based 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.

2.6.11 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 Bank of Nepal. Mr. Karki’s research study was based on only primary sources of data collection. In his research, he had pointed out various findings and objectives. Some remarkable objectives were as follows:

- To study and analysis the presents 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 Venture Banks of Nepal. So, it shows gap between the theory and practice.
- MA is help to managers to formulate organizational strategies as well as policy for decision making.
- In NJVB’s practice of hiring outside expert almost nil. Thus it can be conclude that NJVB’s are in infant stage in practicing of MA tools. Now, here in the banks cannot find MA experts.
- In NJVB’s practicing the MA tools such as Capital Budgeting, Annual Budget, Ratio Analysis and Cash Flow. And not practicing MA such as zero Based Budgeting, Activity Based Costing, Target Costing and 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.

2.6.12 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 findings and objectives. Some remarkable objectives were as follows:

- To study and examine the extent of practice of MA tools and techniques made in Nepalese PE’s.
- To identify the business sector, where MA tools can be applied to strengthen the PE’s.
- 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 PE’s 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 than half of NPE's for making the account related decisions.
- Role of MA tools and technique were found negligible for making MA related decisions.

2.6.13 Mr. Gupta, BalaRam, (2009) has submitted a thesis on the topic of "A Comparative Study on Profit Planning in Manufacturing and Non-Manufacturing Public Enterprises of Nepal." He had focused his study to examine the practice of Management Accounting Tools in public enterprises. He had pointed out various objective & findings. Some remarkable objective were as follow:

- To identify the base to make decision on profit planning.
- To evaluate the disbursement financial budget related with PPC.
- To identify the participatory approach is used for PPC.
- To evaluate the major problems faced by the enterprises in developing and implementing Profit plans.

Some major finding were as follows;

- The enterprises studied have not been able to generate work efficiency and financial capability. They are still dependent upon government protection and subsidies.
- There is no adequate & clear cut co-ordination among various units in the organizations.
- Objective of the enterprises are controversial there is conflict between profit and social goals.

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 enterprise 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 researches examines the present practices 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 researchers will do from writing the hypothesis and its operational implications to the find 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 total population. Covering six Nepalese Public Trade Companies.

3.4 Data Processing Procedure

This sector 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 (X) 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 in 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 & loss account in 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)

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 independent)

Hypothesis 4:

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

Alternative Hypothesis H_1 : There is no significant relationship between the use of annual budgeting and ratio analysis.(Use of annual budgeting and ratio analysis are dependent)

CHAPTER - FOUR

PRESENTATION & ANALYSIS OF DATA WITH FINDINGS

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 TPE's of Nepal. The sub-objective are to identify the MA tools and technique can be applied to strength the performance of TPE's of Nepal and another objective is to identify the major difficulties in application of MA in TPE'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 TPE's of Nepal (i.e. six companies were taken as target population. Seventeen tick marks and open end questions as well 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 as well survey were done. The data were tabulated into 17 tables. Two different hypothesis were tested by chi-square (χ^2) statistical tools. The major findings of the research were based on the analysis and interpretation of data, which were included at the end of this chapter.

4.2 Percentage Analysis of Management Accounting Practice in Trading Public Enterprises in Nepal

Table No. 4.1
Practice of Management Accounting Tools in TPE'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	-	-

The above table shows the practice of MA tools in TPE'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 MA tools are needed to be carried out for planning, controlling and decision making processes. Almost 50 percent of PTC's Nepal were practicing cost segregation into fixed and variable, break-even analysis, capital budgeting and ratio analysis. Unlike that 100 percent, 83 percent, 67 percent and 33 percent companies were practicing annual budgeting, cash flow, responsibility accounting

and activity based budgeting respectively. But long term budgeting, standard costing and zero based 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 No. 4.2

Base for Not Practiced Management Accounting Tools in TPE'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

Source : Field Study, 2010

The above table 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 percent and 33 percent responses. The high cost and others receive 17 percent response.

Table No. 4.3

Method of Segregating Mixed Cost into Fixed and Variable in TPE'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	-	-

Source : Field Study, 2010

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

Table No. 4.4
Base for Budget Preparation in TPE'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 Exp.	6	4	67
3	Zero Base Budgeting	6	-	-
4	Activity Based Budgeting	6	2	33
5	Other	6	-	-

Source : Field Study, 2010

The above table shows the base for budget preparation in TPE's of Nepal. In total 33 percent companies practiced past budget estimates and activities based budgeting. 67 percent companies used to prepare budget based on past actual expenses/historical expenses. None of TPE's of Nepal practiced zero base budgeting. Therefore, mostly past actual expenses were base for budget preparation.

Table No. 4.5
Budget Preparation System in TPE's of Nepal

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

Source : Field Study, 20010

The above table shows the budget preparation system practiced in TPEs of Nepal. It is clear that 67 percent companies practiced prepare budget by committee, planning department and chief of finance division respectively. None of TPE's o 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 No. 4.6
Budget Practice in TPE'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 Study, 2010

The above table shows the type of budget prepared in PTC's of Nepal. It is clear that 67 percent companies practiced master budget, 33 percent companies practiced cash budget only and operational budget only. Therefore, master budget was widely practiced by the sampled companies.

Table No. 4.7
Types of Budget Practiced on the Basis of Period in TPE'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 (3 years)	6	-	-
3	Long Term Budget (5 year or more)	6	-	-
4	Other	6	-	-

Source : Field Study, 2010

The above table shows the types of budget practiced in TPE's of Nepal. It is obvious that 100 percent companies practiced short term budget (i.e. 1 year or less). None of TPE'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 No. 4.8
Practice for Pricing Product in TPE'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 Study, 2010

The above table shows the product pricing technique practiced in TPE's of Nepal. It is clear that 50 percent of TPE's of Nepal practiced full cost pricing and transfer cost pricing. But 17 percent 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 No. 4.9**Pricing of Inventory Practiced in TPE's of Nepal**

S.N.	Technique/ Method	Perpetual			Periodic		
		No. of Respondents	No. of Practitioner	%	No. of Respondent	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 Study, 2010

The above table shows the pricing of inventory practiced in TPE's of Nepal. It is obvious that 33 percent companies practiced weighted average for perpetual as well as periodic. But 50 percent companies practiced FIFO for perpetual. 17 percent companies practiced FIFO and LIFO for periodic only. 17 percent 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 No. 4.10**For Cost and Revenue Estimation Practice in TPE's of Nepal**

S.N.	Cost and Revenue Estimation Technique	No. of Respondents	No. of Practitioner	%
1	Past rend 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 Study, 2010

The above table shows the practice of cost and revenue estimation in TPE's of Nepal. It is obvious that 83 percent of TPE's of Nepal practiced past trend analysis. 50 percent companies practiced market survey and 33 percent companies practiced judgment analysis. None of TPE's of Nepal practiced zero base budgeting. Therefore, past trend analysis was mostly practiced than market survey as well judgment analysis to cost and revenue estimate of TPE's of Nepal.

Table No. 4.11
Capital Budgeting or Long Term Investment Decision Practiced in TPE's of Nepal

S.N.	Tools	No. of Respondents	No. of Practitioner	%
1	Pay back 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	-	-

Source : Field Study, 2010

The above table shows the capital budgeting or long term investment practiced decision in TPE's of Nepal. It is clear that 33 percent of TPE's of Nepal practiced payback period, net present value and internal rate of return while 17 percent company practiced average rate of return and profitability index tools. None of TPE'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 No. 4.12

Basis for Alternative Decision Practiced in TPE'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 of purchase decision	6	2	33
5	Other	6	-	-

Source : Field Survey, 2010

The above table shows the alternative decision making practiced in TPE's of Nepal. It is clear that 100 percent of TPE's of Nepal practiced tender process. 83 percent companies practiced quotation process. 50 percent and 33 percent 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 No. 4.13

Risk Adjustment Practice Used While Evaluating Capital Investment in TPE'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 Study, 2010

The above table shows risk adjustment practice used while evaluating capital investment in TPE's of Nepal. It is clear that 17 percent o TPE's of Nepal practiced sensitivity analysis while 50 percent companies practiced required rate of return and 33 percent companies short payback period, higher IRR and estimated for cash flow basis respectively. Therefore, required rate of return was widely used than others.

Table No. 4.14
Tools Use for Evaluation of Overall Performance at the End of the
Accounting Year in TPE'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 Study, 2010

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

Therefore, profit and loss criteria was mostly practiced and used in TPE's of Nepal than other tools.

Table No. 4.15

Practice of Management Accounting Function in TPE'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	-	-

Source : Field Study, 2010

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

Table No. 4.16

The Main Factor that Affects the Decision Making Process in TPE'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	-	-

Source : Field Study, 2010

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

Table No. 4.17
The Major Difficulties for the Application of Managerial Accounting Tools and Technique in TPE's of Nepal

S.N.	Major Difficulties	No. of Respondents	No. of Practitioner	%
1	Lack of information	6	2	33
2	Size of 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 Study, 2010

The above table shows the major difficulties in application of MA tools and technique in TPE's of Nepal. It is clear that 33 percent PTC's of Nepal faced by lack of information, 67 percent PTC's faced by size and nature of business, 17 percent TPE's faced by high cost while 33 percent PTE's faced by long procedure and 50 percent companies faced by specific no policy for implementation. Therefore, size and nature of business and specific no policy for implementation was mostly major difficulties for the application of MA tools and 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 and variable and profit and loss account, (use of cost segregation into fixed and variable and profit and loss account are independent)

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

Solution:

2×2 Contingency Table

Practicing MA Tolls

MA Tools	Yes	No	Row Total
Cost segregation into fixed and variable	3 a	3 b	6 (a+b) r ₁
Profit and 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' correction for continuity for calculating χ^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 2×2 contingency table is presented in the following table.

2×2 Contingency Table

Practicing MA Tolls

MA Tools	Yes	No	Row Total
Cost segregation into fixed and variable	3.5 a	2.5 b	6 (a+b) r ₁
Profit and loss account	5.5 c	0.5 d	6 (c+d) r ₂
Column total	9 (a+c) c ₁	3 (b+d) c ₂	12 N

Calculation of χ^2

O	$E \frac{RT \times CT}{N}$	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
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_0 is,

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

Where,

- χ^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) = (c-1) (2-1) = 1

Level of significance (α) = 5%

Where,

d.f. = Degrees of freedom

Tabulated value of χ^2 at 5 percent level of significance for 1 d.f. is 3.84.

Result

Since the calculated value of χ^2 1.78 is less than the tabulated value of χ^2 at 5 percent 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 and variable and profit and 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:

2×2 Contingency Table
Practicing Capital Budgeting Tools

MA Tools	Yes	No	Row Total
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 frequency is less than 5, therefore by applying Yates' correction for continuity for calculating χ^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 2×2 contingency table is presented in the following table.

2×2 Contingency Table
Practicing Capital Budgeting Tools

MA Tools	Yes	No	Row Total
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 χ^2

O	$E \frac{RT \times CT}{N}$	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,

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

Where,

- χ^2 = Chi-square test
- O = Observed frequency
- E = Expected frequency

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

Level of significance (α) = 5%

Where,

d.f. = Degrees of freedom

Tabulated value of χ^2 at 5 percent level of significance for 1 d.f. is 3.84.

Result

Since the calculated value of χ^2 0.375 is less than the tabulated value of χ^2 at 5 percent 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 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:

2×2 Contingency Table

Practicing MA Tools

MA Tools	Yes	No	Row Total
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 frequency is less than 5, therefore by applying Yates' correction for continuity for calculating χ^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 2×2 contingency table is presented in the following table.

2×2 Contingency Table

Practicing MA Tools

MA Tools	Yes	No	Row Total
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 χ^2

O	$E \frac{RT \times CT}{N}$	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
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,

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

Where,

- χ^2 = Chi-square test
- 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 (α) = 5%

Where,

d.f. = Degrees of freedom

Tabulated value of χ^2 at 5 percent level of significance for 1 d.f. is 3.84.

Result

Since the calculated value of χ^2 0.375 is less than the tabulated value of χ^2 at 5 percent 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 annual budget and ratio analysis. (Use of annual budget and ratio analysis is independent)

Alternative Hypothesis (H_1) : There is significant relationship between the use of annual budget and ratio analysis. (Use of annual budget and ratio analysis is dependent)

Solution:

2×2 Contingency Table

Practicing MA Tools

MA Tools	Yes	No	Row Total
Break even analysis	6 a	0 b	6 (a+b) r_1
Cash flow analysis	3 c	3 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' correction for continuity for calculating χ^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 2×2 contingency table is presented in the following table.

2×2 Contingency Table

Practicing MA Tools

MA Tools	Yes	No	Row Total
Break even analysis	5.5 a	0.5 b	6 (a+b) r_1
Cash flow analysis	3.5 c	2.5 d	6 (c+d) r_2
Column total	9 (a+c) c_1	3 (b+d) c_2	12 N

Calculation of χ^2

O	$E \frac{RT \times CT}{N}$	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
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,

$$\begin{aligned} \chi^2 &= \sum \frac{(O-E)^2}{E} \\ &= 1.7778 \end{aligned}$$

Where,

- χ^2 = Chi-square test
- 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 (α) = 5%

Where,

d.f. = Degrees of freedom

Tabulated value of χ^2 at 5 percent level of significance for 1 d.f. is 3.84.

Result

Since the calculated value of χ^2 1.7778 is less than the tabulated value of χ^2 at 5 percent 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.

- (i) This study on MA tools practiced in TPE'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 percent TPE's of Nepal here as 83 percent companies practiced cash flow and 67 percent companies practiced responsibility accounting. 50 percent companies practiced cost segregation into fixed and variable, break even analysis, capital budgeting ratio analysis respectively. Activity based budgeting was practiced by 33 percent companies. Budgeting long term, zero base budgeting and standard costing tools were not practiced in TPE's of Nepal.
- (ii) 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 percent where as 17 percent company did not practiced because of high cost and others.
- (iii) The average method and analysis methods were prepared for cost segregation into fixed and variable by 83 percent and 17 percent TPE's of Nepal. High low point method and regression method were not used to practice in TPE's of Nepal for Segregate mixed cost into fixed and variable.
- (iv) The past actual expenses of historical expenses were basis used for preparation of budget. It recorded 67 percent of PTC's of the Nepal. But only 33 percent TPE'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.

- (v) The committee, planning department and chief of finance division rating 67 percent of TPE's of Nepal used to prepare budget. But outside experts was not taking for budget preparation.
- (vi) Types of budget practiced in TPE's of Nepal were cash budget only, operational budget only and master budget. Almost 67 percent PTC's of Nepal practiced master budget while 33 percent prepared cash budget only and operational budget only. Most of TPE's of Nepal practiced master budget for carryout operational activities.
- (vii) Regarding types of budget practice in TPE's of Nepal, it was found that 100 percent TPE's of Nepal prepared short term budget. It was also found t hat medium term budget and long term budget were not prepared.
- (viii) The full cost pricing and transfer cost pricing were adopted by 50 percent of PTC's on Nepal. Variable cost pricing and activity based cost pricing were practicing were practiced by 17 percent of TPE's of Nepal which was below average.
- (ix) The FIFO pricing of inventory in PTC's of Nepal, was used by 50 percent and 17 percent of the companies used FIFO for perpetual and periodic respectively. Weighted average was used by 33 percent of th companies by perpetual as well as periodic. LIFO was used by 17 percent of the companies for periodic. Specific items used by 17 percent of the companies for perpetual.
- (x) The cost and revenue estimation was used by 83 percent of PTC's of Nepal on he basis of past trend analysis. 50 percent and 33 percent companies made it on t he basis of market survey and judgement analysis respectively. Zero base budgeting was not practiced by TPE's's of Nepal.
- (xi) The capital budgeting or making long term investment was used by TPE's of Nepal. The payback period, net present value and internal rate of return respectively were used by 33 percent of TPE's of Nepal. But 17 percent companies practiced average rate of return and

profitability index respectively. Modified internal rate of return was not practiced by TPE's of Nepal.

- (xii) Tender process was followed by 100 percent of TPE's of Nepal. But 83 percent, 50 percent and 33 percent 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.
- (xiii) For practices of risk adjustment while evaluating capital investment in TPE's of Nepal, 50 percent companies practiced required rate of return 33 percent companies practiced short payback period, higher IRR and estimated for cash flow basis respectively 17 percent companies practiced sensitivity analysis tools.
- (xiv) The overall performance at the end of the accounting year was used by 100 percent of TPE's of Nepal taking the reference of profit and loss account. 17 percent companies practiced budgetary control, ratio analysis and activity based costing 33 percent companies practiced cash flow analysis. The standard costing (estimation of cost limit) was not practiced.
- (xv) The controllership functions were performed by 83 percent of TPE's of Nepal. 33 percent and 17 percent companies practiced stewardship and treasureship respectively.
- (xvi) Out of the total respondents 83 percent of felt that the decision making process. But 33 percent felt that management accounting techniques and objective of the company and 17 percent felt that the by discretion of the affect the decision making process.
- (xvii) The size and nature of business was taken as major difficult for the application of managerial accounting tools and technique in TPE's of Nepal by 67 percent companies. 50 percent companies felt no specific policy for implementation. 33 percent companies felt lack of information and long procedure. 17 percent company felt high cost.

(xviii) The hypothesis test 1, revealed that TPE's of Nepal were independent in use of cost segregation into fixed and variable and profit and loss account. It means that there is no significance relationship between the use of cost segregation into fixed and variable and profit and loss account. The hypothesis test 2, revealed found that TPE's of Nepal were independent in use of pay back period and net present value. It means that there is no significance relationship between the practicing of use period and net present value tools. The hypothesis test 3, revealed that TPE'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 TPE's of Nepal were independent in use of annual budgeting and ratio analysis. It means that there is no significance relationship between the uses of annual budgeting and ration analysis.

CHAPTER - FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Management is always 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 uncertain and risk which have opportunity as well as threats for organization. Accounting is the process of recording, classifying, analysis and identifying and interpretation 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 function 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 PE's were established for socio-economic development as well 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 e-commerce, 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 MA tools and techniques which can be applied for various types of companies. Such tools are, cost classification and estimation, cost allocation, profit measurement and recognition, cost volume profit planning and 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 and techniques in Trading public enterprises in Nepal. And other objective is to find out the reason for non practicing the MA tools and 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 is designed. 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, interpretation as per the requirement of the study. Simple percentage tool has been applied to analyze and interpret of findings. The statistical tools chi-square (χ^2) was used to test the hypothesis related test.

5.2 Conclusion

This research study showed different types of management accounting tools and 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 not practiced.

In Trading Public enterprises in Nepal, practices of hiring outside expert for practicing MA 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 and techniques. From the hypothesis tests, it was cleared that TPE's were independently practices the MA tools and techniques. It means that, MA tools and techniques are independent among them in TPE'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 research study showed that the present practice of MA tools and techniques were more traditionally approach. It any organizations follow properly MA tools and techniques for managerial adjustment in the utilization of limited resources that would definitely show better performance. So, the following recommendations are based on findings of this research study.

- (i) 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 tools 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 established separate MA department.

- (ii) Nepalese public trade companies are lack of expertise about MA tools and techniques. Therefore, they should hired MA experts. If not possible, they can sent their existing employee for on the job training programmed for the certain period. If possible it should take service from consultant. For information about the MA tools and technique, management should established management accounting information system section in MA department which also helps to management the different issues.
- (iii) 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 least square method.
- (iv) For budget preparation, Nepalese public trade enterprises were practicing based on the basis of past actual expenses and past budget estimates. Those are method because part will not happen in future. So, it is recommended to use zero based budgeting, activity based budgeting for budget preparation.
- (v) The budget in, Nepalese public trading enterprises were prepared budget by committee, planning department and chief of finance division mostly. It is also recommended to take outside expert service for budget prepared which helps to make superior budget.
- (vi) Nepalese public trading enterprises were practicing only short term budget. So, it is recommended to implement effectively all the components of master budget.
- (vii) Nepalese public trading enterprises were practicing only short term budget. So, they should practicing medium term budget and long term budget to achieve their long term objectives.
- (viii) Nepalese public trading enterprises 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 help to achieve their goal.
- (ix) While purchasing fixed assets or making long term investment decision, Nepalese public trade companies should use net present value, internal rate of return and discounting payback period.

- (x) Nepalese public trading enterprises should use not only fully cost pricing and transfer costing pricing but also activity base cost pricing and variable cost pricing.
- (xi) Nepalese public trading enterprises should use not profit and loss account but also sue/practice standard costing, budgetary control, ratio analysis, cash flow analysis sand activity based costing for evaluation of overall performance of companies at the end of the accounting year.

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RESEARCH QUESTIONNAIRE

The questionnaires are baseline to conduct a research work entitled "Management Accounting Practices in Trading Public Enterprises 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 :

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

- 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	()	()

- 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) Average method
- d) Analysis method
- e) If any other, please specify

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

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

5. Who prepare 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

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

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

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 base cost pricing
- e) If any other, please specify

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 | | |

10. Which techniques does the trading company practice for cost and revenue estimation?

- a) Past trend analysis
- b) Zero base budgeting
- c) Market survey
- d) Judgemental analysis
- e) If any other, please specify

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

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

- a) Quotation process
- b) Special order decision
- c) Tender process
- d) Lease or purchases decision
- e) If any other, please specify

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

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

15. What function of management account do you expect in your trading company?

- a) Stewardship
- b) Treasurership
- c) Controllership
- d) If any other, please specify