PROFIT PLANNING AND CONTROL OF NEPAL BITUMEN AND BARREL UDHYOG LIMITED

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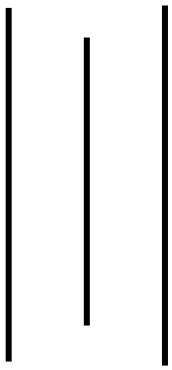
A Thesis Submitted to:
Office of the Dean
Faculty of Management
Tribhuvan University



In partial fulfillment of the requirement for the degree of Master of Business Studies (MBS)

Kathmandu, Nepal
March 2011

RECOMMENDATION

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DECLARATION

I hereby declare that the work reported in this thesis entitled "**Profit Planning and Control of Nepal Bitumen and Barrel Udhyog Limited**" submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the degree of Master of Business Studies (MBS) under the supervision of **Krishna Prasad Acharya and Shankar Raj Joshi** of Shanker Dev Campus, T.U.

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ACKNOWLEDGEMENT

This research work has been completed with great deal of support and guidance from many people and organization. It was impossible to complete this without their valuable inputs. Now, I am taking this opportunity to express my sincere acknowledgement for the input.

I would like to express my heartily appreciation to my thesis supervisors Krishna Prasad Acharya and Shanker Raj Joshi Shanker Dev Campus, Tribhuvan University for their able guidance, critical suggestions, encouragement, support, co-operation and supervision throughout this study.

I also owe an indebtedness to all reputed authors whose writing have provided me the necessary guidance and invaluable materials for the enrichment of research paper in all possible ways.

At last but not the least, my paramount dedication is to my parents who spend their valuable time and efforts and made a great sacrifice for my higher education and always created good environment and regularly promoted for this study. My special thanks goes to my friend Mr. Dipendra Pudasaini for his incessant prop up and assist on the way of doing this research work. And thanks to all my friends for their valuable suggestion and advice to the fulfillment of thesis.

Moreover, it is needless to say that to error is human and I am also no exception, so I apologize for any errors and mistakes committed in this research works.

Sujan Rijal

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ABBREVIATIONS

BOD	:	Board of Director
BS	:	Bikram Sambat
CA	:	Current Assets
CA	:	Current Ratio
CE	:	Capital Employed
CL	:	Current Liabilities
Co.	:	Company
CP	:	Cost Price
FY	:	Fiscal Year
GDP	:	Gross Domestic Product
GNP	:	Gross National Product
GP	:	Gross Profit
i.e.	:	That is
Ltd.	:	Limited
NBBUL	:	Nepal Bitumen and Barrel Udhyog Limited
NPAT	:	Net Profit After Tax
PE	:	Probable Error
PPC	:	Profit planning control
Pvt.	:	Private
QA	:	Quick Assets
QR	:	Quick Ratio
Rs.	:	Rupees
SE	:	Shareholder's Equity
SP	:	Sales Price
WTO	:	World Trade Organization

CHAPTER - I

INTRODUCTION

1.1Background of the Study

Profit planning is a well though out operational plan with its financial implications expressed at both long and short range profit plans and budgets in the forms of financial statements, including balance sheet, income statement and cash and working capital projections. It, clearly states the future state of affairs of a firm and set up the best possible way to get there. Profit plan is a financial plan prepared as a guide to control future business conditions. It is a systematic approach for attaining effective management performance.

The concept of comprehensive profit planning and control encompasses and fully depends upon as to what extent the management follows proper planning, effective co-ordination and dynamic control. This requires that management must plan for future financial and physical requirements to maintain profitability and productivity of the business organization. Thus, the procedure for preparing plan in respect of future financial and physical requirements is generally called profit planning.

An effective PPC is vital for the success and survival of a business firm. Without a fully coordinated PPC, management cannot run business systematically. Organizations that do not plan are likely to wonder aimlessly and ultimately succumb to the swirl of current events.

"The concept and technique of PPC has wide application in individual business enterprises, government units, charitable organization and virtually all group endeavors" *(Welsh, et al.; 1999: 12).*

A PPC program helps the management perform its planning function by developing a strategic (long-range) profit plan and a tactical (short-range) profit

plan. Both of these profit plans include monetary expectation i.e. goal for assets, liabilities, profits and return on investment. PPC program also helps management perform its control function by providing realistic goals and standards that are implemented and are then compared with actual results to measure performance. Under PPC, this performance measurement extends from the top to the lowest organizational level in the enterprise. Profit planning involves selection of defined periods of time for the strategic and tactical profit plans (often five years and one year respectively). Each division of the company prepares plans and then combined and summarized into the overall profit plan. The development of an annual profit plan ends with the planned income statement, the planned balance sheet and the planned statement of cash flows, based on the integrated detailed plan developed by the management for the planning period. It also reports the primary impacts of the detailed plans on the financial characteristics of the company. Moreover, PPC process and the accounting process must be in harmony. An accounting system is used to record the economic effects of the completed transactions on an enterprise. This means that a typical accounting system primarily accumulates and reports the actual historical data about an enterprise. The actual historical information provided by an accounting system is often useful in managerial planning.

1.2 Brief Overview of Nepal Bitumen and Barrel Udhyog Limited (NBBUL)

Nepal a landlocked country, construction of road plays a crucial role for the development of country. Taking this in view, Nepal Oil Corporation Limited established a public limited company named as Nepal Bitumen and Barrel Udhyog Ltd. (NBBUL) in 1984. The head office of NBBUL is located at Pulchowk, Lalitpur and factory at Amlekhgunj, Bara District. The company has a share capital of NRs. 210,68,000 and provides employment for 50 person (25 technical staff and 25 Administrative staff).

NBBUL has now taken over by Panchakanya Group in 1994 August, (Bhadra, 2051), a leading industrial and trading house of Nepal, under privatization program of the then His Majesty's Government. Panchakanya Group has 65% share, NBBUL's staff has 5% and rest 30% belongs to the general public. Among six board of members, four are from Panchakanya Group and rest two members are one from NBBUL staff and another from the general public.

Products of NBBUL

The major products of NBBUL are as follows:

a. Barrels, Drums and Containers

NBBUL produces mild steel, containers of different designs, dimensions and thicknesses suitable for the packaging of liquid and semi-liquid product. The containers, manufactured as per international standard specifications, by using quality cold rolled sheets with paints in attractive colors and designs to meet customer's requirement. High quality, low cost and functional characteristic of the containers provide complete satisfaction to the users. NBBUL is the only industry manufacturing 160 ltr. Drums and 200 ltr. barrel in the country.

Available sizes:

i. Barrels	200 ltr. capacity
ii.Drums	160 ltr. capacity
iii.Containers	20 and 50 ltr. Capacity

b. Bitumen

Bitumen is extensively used as binder in road construction and maintenance. NBBUL imports 80/100 prime grade bitumen, direct from the refinery in bulk and refills it in self produced 160 ltr. capacity drums of 0.63 mm thickness. It's automatic filling plant equipped with photo-censored device has efficient and accurate filling capacity.

c. Bitumen Emulsion

Bitumen Emulsions are dispersion of very fine bitumen particles in an aqueous medium. These liquid products are functional in use and find a wide

application in road construction and maintenance, water proofing, soil stabilization and in many other special circumstances where cold application of bitumen is desirable. Bitumen emulsion may be of Cationic or Anionic type. Cationic bitumen emulsion, now-a-days, has become more popular in use because of its better qualities than that of bitumen.

NBBUL manufactures Rapid, Medium and Slow setting types of Cationic Bitumen Emulsion that conforms to the following international standards:

British Standard	BS 434: 1984
American Standard	ASTM: D244-83
Indian Standard	IS: 8887-78

These emulsions are produced by processing prime quality 80/100 grade bitumen, water and high quality emulsifier under controlled production parameters, such as, PH, temperature etc. The Hi-tech colloid mill with its superfine milling efficiency provides fine and narrow particle distribution which gives the emulsion and increases storage stability and high viscosity. The quality of the emulsion is controlled at every step of production and is tested in the laboratory. NBBUL issues test certificate in every consignment to the customers.

The cationic bitumen emulsion named HIMALSION is available in 200 kg: packed in sound and strong MS barrel. HIMALSION a cationic bitumen emulsion is designed to suit the climatic and traffic conditions of our country by formulating high quality ingredients in most advanced formulae. Due to the incredible qualities, it stands as an effective economical alternative to conventional bitumen in the construction of roads, highways and airfields. HIMALSION is environment friendly. Unlike bitumen, it is in liquid form and ready for application. No heating is required, thus it creates no air pollution, saves energy and the adhesive property of the binder remains intact. The brown colored emulsion-changes to black on breading, remains sufficiently fluid

during application. Its viscosity is barely affected by change of temperature or by storage.

HIMALSION Grades and Uses

Available Grades	**Uses**
A. Rapid Setting	
1. HIMALSION- R/1 (equivalent grade, CRS-1 or K1 60)	Concrete curing, Lean mix sealing, Grouting, Patching, Sealing formation and sub-base. Unsuitable for mixing with aggregates.
2. HIMALSION- R/2 (equivalent grade, CRS-2 or K70) Hot sprayed.	Grouting, Sealing formation and sub-case, Surface dressing and sealing. Unsuitable for mixing with aggregates.
B. Medium Setting	
3. HIMALSION- M/1 (equivalent grade,CMS-1 or K2)	Coated stone, Retreading
4. HIMALSION- M/2 (equivalent grade, CMS-2 or K1 40)	Concrete curing, Lean mix sealing, Mist spraying, Tack coating.
C. Slow Setting	
5. HIMALSION- S (equivalent grade, CSS-1 (h) or K3)	Coated stone, Fog sealing.
D. Quick Setting	
6. HIMASION- QS (equivalent grade, QS or K3)	Slurry sealing.

(Source: Prospectus of NBBUL)

Besides cationic bitumen, NBBUL produces different grades of ANIONIC EMULSIONS and CUTBACKS also.

1.3 Statement of the Problem

Profit is one of the major objectives of the company. It is essential for an organization not only to survive in the short-run but also to grow and operate in the future successfully. Profit is usually influenced by planning and control

system of any concern. It is known that profit do not just happen it should be managed. That is why commercial enterprises should systematically plan for profit in a manner that enhances overall efficiency of the firm and in a manner, which provides a tool for practical administration of a business as a whole.

It is apparent that almost all the enterprises established in public sector are facing huge losses. NBBUL is one of the Manufacturing enterprises in industrial sector facing the same problem of dismal performance and financial position of the enterprise is getting worse day by day. Therefore, this study is designed to identify the planning and performances aspects of the company.

Following are the main issues to be dealt in respect of this company:

- What is the condition of company's profitability and financial aspects?
- Is there any variance between budgeted and actual financial figure?
- To what extent is the process of master budgeting being followed by NBBUL?
- What steps should be taken to improve the master budget system in the manufacturing companies like NBBUL?

1.4 Objectives of the Study

The main objectives of the study are as follows:

a. To analyze the profit and loss of NBBUL.
b. To analyze the various functional budget and actual achievement of NBBUL.
c. To evaluate the variance any in between budget and achievement of NBBUL.
d. To examine the financial performance of NBBUL in terms of various financial ratios.

1.5 Significance of the Study

This study has primarily focused on profit planning and control aspect of manufacturing companies like NBBUL. The systematic and scientific approaches of profit planning and budgeting furnished here would be of immense help to the concerned company to collect, produce and market herbs and herbal materials. The companies like NBBUL can prepare, appraise and evaluate the profit planning which in turn help to prepare overall strategic planning, implementation and control. The relationship among financial variables that has been described in the study would give very insightful explanation of how a given variable affect another financial variable. This would be significant to manager to produce desire effect on some variable changing another one.

Likewise, government may take advantage of the study to review their policy reforms. Moreover students, researchers, scholars, and other interested parties those are interested this field may take advantage of the study.

Likewise this study is designed to conduct from management perspective, planners and policy makers will find its results important. This research will also be fruitful because research is related to NBBUL with respect to profit planning perspective.

Without proper planning, profit will not just happen. So, every commercial enterprise should systematically plan for profits in a proper manner. Various functional budgets are the basic tools for proper planning of profit and control over them. The present study will try to analyze and examine the budgeting system and its uses as tools of profit planning in NBBUL.

It is only from profit that investors can be compensated for risking their capital. It ensures jobs for workers, customer for suppliers of raw materials and product for consumers. Hence, it is the primary obligation for management of the firm

to maximize the firm's profit over the long term by satisfying its social responsibility. Profit planning process considerably contributes to improve the profitability of an enterprise and to improve the overall financial performance of an organization by the help of best and effective utilization of resources and thereby an improvement in the industrialization process of a country.

Accomplishment of objectives in every organization depends upon the application of resources. This availability of resources is scare and the financial performance of an organization depends purely on the use of its resources. Budgeting is the key to productive financial planning. So all the organizations running under commercial principle have to give regard to these most important single tools while managing their physical and financial targets. If the planning process of an organization is effective and result oriented, the pace of development naturally steps forward.

1.6 Limitations of the Study

This study is concerned with profit planning in NBBUL. The study has the following major limitations.

a. This study is based on the profit planning system in NBBUL.
b. The study covers the analysis of 5 years from the fiscal year 2004/05 to 2008/09.
c. The comprehensiveness and accuracy of this study is based on the secondary data available from NBBUL and other documents, published books, booklets etc. provided by NBBUL.
d. This study is focused on some financial and accounting aspects and it does not cover the other areas of the enterprise.
e. This study covers NBBUL only as a unit of analysis and may not reflect the profit planning situation of whole manufacturing industries.

1.7 Organization of the Study

The entire study has been organized into five main chapters as:

Chapter-I: Introduction

The first chapter deals with background of the study, a brief review of NBBUL, statement of problem, objective of the study, significance of the study and limitations of the study.

Chapter-II: Review of Literature

The second chapter deals with conceptual framework including the fundamental concept of PPC and tools of PPC. It also includes the brief review of previous research work.

Chapter-III: Research Methodology

The third chapter deals with the research methodology which has been followed to achieve the purposes of the study. It consists of research design, the period covered, nature and sources of data, tools to be used, research variable etc.

Chapter-IV: Data Presentation and Analysis

The fourth chapter deals with presentation and analysis of data. It gives a clear picture of how the collected data has been presented on the study and how it has been analyzed.

Chapter-V: Summary, Conclusion and Recommendations

And at last, the fifth chapter shows the summary of whole study, conclusion drawn and recommendations given. This ends the study paper.

CHAPTER – II

CONCEPTUAL FRAMEWORK AND REVIEW OF LITERATURE

This chapter attempts to build strong theoretical background through the help of which further search for solutions of the research problems would be easier. Profit planning: its theoretical background, academic insights, nature, advantages, importance and other various issues have been addressed here in this chapter as contributed by different management experts and others towards this field. While reviewing literature different sources like books, documents, bulletins, reports, journals and articles etc. are consulted. Conceptual framework first and then empirical studies have been presented here in this chapter

2.1 Conceptual Framework

Every one desires for rapid socio-economic development of the country by utilizing the scarce resources. Public enterprise is one of the most important means of socio-economic development of the country. The rationale behind the establishment of public enterprises are basically to accelerate the rate of economic growth, to build infrastructures of development, to make provision of public utility, to generate employment opportunity, to supply essential commodities and service; and to reduce trade imbalance of the country. But in fact, operational efficiency of the Nepalese public enterprises does not seem satisfactory in accomplishing their objectives. In this context, a study of profit planning in manufacturing public enterprises in Nepal with a special reference HPPCL has been undertaken as a case study to analyze the various financial budgets that are prepared by HPPCL, to sketch the trend of the profitability, to evaluate the variance between budget and actual of the concern and to examine practice and effectiveness of profit planning. Further, reason as to why profitability has been negative, and the factors responsible for such a state of affairs have been explored.

The present section, conceptual framework has been made with a view to recapitulate the basic concept of literature to show how to complete the present line of study. They have analyzed and searched using appropriate tools and techniques. The chapter mainly incorporates concept of profit and profit planning, important and limitation of profit planning development of profit planning. Level of forecasting, corporate planning, budgets and budgeting, process of profit planning and the fundamentals of profit planning are the subjects to be dealt here.

2.1.1 Profit and Planning

Generally, profit planning is known as planning for profit, which is planned by the management of the concern. The task should be implemented according to plan, so it directs the organization toward achieving profit. Before going into the in-depth view of profit planning the researcher has to get some idea about profit and planning.

Profit plan is estimation and predetermination of revenues and expenses that estimate how much income will be generated and how it should be spent in order to meet investment and profit requirements. In the case of institutional operation it presents a plan for spending income in a manner that does not result in a loss.

Hence Profit planning represents an overall plan of operations, covers a definite period of time and formulates the planning definitions of management.

Dictionary meaning of profit is the money that you make in business or by selling things, especially after paying costs involved, the advantage that you get from doing something *(Hornby; 2000: 1011).*

Profit is essential to survive in any business concern for its successful operation, future expansion and growth. It is the primary measures of success

of business organization. It is the excess income over the cost of production. The word profit implies a comparison of the operations of business between two dates, which are usually separated by an interval of one year. The term profit is very controversial and there are several different interpretation about it. It has various dimension and views to be realized. The researcher can say very frankly that, it has not yet been defined as such definition can solely, wholly and fully be accepted. The researcher has already accepted the view of Lynch and Williamson, an economist, labour leader, investor, revenue agent and an accountant of the concern has different view about profit. An economist will say that profit is the reward for entrepreneurship for risk taking. A labour leader might say that it is a measure of how efficiently labour has produced and that it provides a base for negotiating a wage increase. An investor will view it as a gauge of the return on his or her money. An internal revenue agent might regard it is the base for determining income taxes. The account will define it simply as the excess of a firm's revenue over the expense of predicting revenue in a given fiscal period.

Whenever any person translates his operating plans into financial terms and used his estimates of the probable income, expenses and profit as a guide in planning and conducting the operation of a business, he is in fact profit planning.

Profit is the reward for risk taking in business. An entrepreneur earns profit as reward for his innovations. It also is resulted from favourable moments of the general price level. The greater degree of monopoly power, the greater profit made by the enterprise *(Joshi; 1993: 10).* Economist's argues on profit may be put in three broad groups. The first looks upon profit as the reward for bearing risks and uncertainties, the second views profit as the consequence of perfection and in-perfection in the competitive adjustment of the economy to dynamic change, the third sees profit as the reward for successful innovation *(Joel; 1997: 6).* It could be noted that profit is residual income left after the

payment of the contractual rewards to other factors of production *(Joshi; 1985: 45).*

Profit is the primary measure of operational efficiency of a business firm. The success of business depends largely upon the profit earned by the business. In other word, the managerial efficiency of any concern is reflected upon the volume of profit. So, profit is a signal for the allocation of resources and a yardstick for judging managerial efficiency *(Kulkarni; 1985: 45).*

In the definitions, the researcher can conclude that there is no definite definition of profit. It depends on the definer's views; and their interest. The researcher would use the profit as revenue after cost of production. Under the cost of production, all factors of production should be considered for e.g. house rent, labour wage, material cost, machine cost, cost of capital as well a opportunity cost of capital.

Planning consists of setting goals for the firm, both immediate and long range; considering the various means by which such goals may be achieved and deciding which of any available means would be best suited to the attainment of the goals sought under the condition expected to prevail *(Lynch and Willamson; 1996: 5).* Dictionary meaning of planning is the act or process of making plans for something (for example, curriculum, financial and family planning also) and plan means something that you inter to do or achieve, a set of things to do in order to achieve something, especially one that has been considered in detail in advance and way of investing money for the future: a saving plan *(Hornby; 2000: 962).*

Planning consists in setting goals for the firm, both immediate and long range; considering the various means by which such goals may be achieved; and deciding which of any available alternative means would be best suited to the attainment of the goals sought under the conditions expected to prevail *(Lynch*

and Willamson; 1996: 5). Planning means deciding in advance what is to do in future. It is a method of thinking out acts and purpose before hand. Planning is the concrete recognition of the futurity of present decisions. Planning is process of developing enterprise objectives and selecting a future course of action to accomplish them. It includes (a) establishing enterprise objectives, (b) developing premises about the environment in which they are to be accomplished, (c) selecting a courses of action for accomplishing the objectives, (d) initiating activities necessary to translate plans in to action and (e) re-planning to correct current deficiencies *(Welsch et. al.; 1992: 3).*

It is a continuous process to be performed in an organization. In the passage of time an organization should make the new plans and re-plans of the existing plans. Existing plans must be revised as continuous change and new information becomes available.

The definition of planning deals it as process which is a system approach of management. Planning as a best tool of operational and financial control of an organization. Management planning and control systems play the vital role in operation, financial any and other area of the management of the organization. Following are the role of management planning and control systems.

The term comprehensive profit planning and control is defined as a systematic and formalized approach for performing significant phase of management planning and control function.

Especially it includes

1. The development and application of board and long range objectives for the enterprise.
2. The specification of enterprise goals.
3. A long range profit plan developed in board terms.

4. Short range profit plan detailed by assigned responsibilities (division, products and projects)
5. A system of periodic performance reports detailed by assigned responsibilities, and
6. Follow up procedures

Management planning and control begins with the establishment of the fundamental objectives of the organization, and continues as the process by which necessary resources are provided and employed effectively and efficiently toward achievement of the goals. A management planning and control system provides the comprehensive framework within which this process is carried out. Such a system encompasses all aspects of an organization's operations, and thus is seen as a 'total' system.

To help reduce this massive concept to workable proportions, it is convenient to view it in terms of three subsystems.

a) Strategic Planning
b) Management Control
c) Operational Control

a) Strategic Planning

Strategic planning is along range in its time perspective and complete in its breadth of scope and depth of penetration. Involving as it does the determination and periodic change of organizational objectives, the acquisition and use of the resources required for their attainment and the establishment of the basic policies, which guide the goals oriented activities of the organization, strategic planning is necessarily a top management function. It is highly creative and therefore relatively unstructured in character. Its timing is irregular and opportunistic. It must be tuned in to the external environment within which the organization presently functions, as well as to the direction in which that environment is heading and to the changes that are likely to occur. Thus, there

must be a strong external orientation, with sensitivity to social, economic, political, and international and myriads of other influences.

Plans, policies and decisions for an industrial concern might typically involve selection of plan sites; acquisitions and mergers; new product development; changes in markets and distribution channels; changes in fundamental capital structure; formulation of long range policy; expanding into multinational business activities. Indeed, it might be said that strategic planning established the fundamental internal environment within which all the activities of the organization will be carried on.

b) Management Control

Management control is carried on within the environment established by strategic planning. Its primary emphasis is on carrying out the policies resulting from strategic planning, rather than on setting them. Its time span tends to be short to intermediate term. The activity is some what rhythmic in its patterns of activity and scheduling. Because of the pervasive nature of this function, the participation of management at all levels of the organization is usually required. Its goals are tangible within the broad frame work of overall organizational objectives, and it's focus is on line management which participates in the formulation of near-term plans and the criteria by which the line manger's performance is to be measured.

Thus, within the scope of the total operations of the organization, the management control system must comprise an integrated structure of related subsystems, setting forth the plans and standards of measurement for each and all functioning units of the organization. In contrast with the creative approach to planning characteristic of strategic planning, management control requires administrative and persuasive skills in its successful implementation. Typical of the form taken by the plans flowing from the management control system

are the detailed budgets for all units of the organization for the next year, and the three to five years plans as an extension there-of.

c) Operational Control

Operational control is employed to assure that management planning is carried to fruition effective and efficiently in the organizations. Its scope and focus involve the operating unit. It is executed principally at the level of front line supervision. Its goals are invariably short-term and rather rigidly structured, as are the criteria for measuring performance toward their achievement. Its activity patterns are highly repetitive, and they are characterized by the close adherence to directions, with little exercise of initiative. Some of the typical ways in which operational control systems are implemented are inventory control systems, sales quotas, and sales personnel's reports, credit and collection systems, production scheduling, departmental overhead reports, daily production reports, daily reports of bank balance, responsibility reporting systems measuring actual costs incurred against budget allowances by departments, and the like *(Lynch and Willamson; 1996: 139).*

Planning should start by deciding and defining the objectives of the company, making sure in the process that there are comparative with the skills and resources of the undertaking.

2.1.2 Concept of Profit Planning

After having some concept of profit and planning, the researcher think that it is necessary to know some concept about profit planning. Generally speaking planning for profit is known as profit planning. Profit planning directs the organization toward achieving profit because the task should implement according to plan. In other word if a management plans for profit for a certain period of time it is called profit plans.

The term comprehensive profit planning and control is defined as a systematic and formalized approach for performing significant phases of the management

planning and control functions. Specifically, it involves (1) the development and application of broad and long range objectives for the enterprise; (2) the specification of enterprise goals; (3) a long range profit plan developed in board terms; (4) a short-range profit plan detailed by assigned responsibilities (division, products, projects); (5) a system of periodic performance reports detailed by assigned responsibilities; and (6) follow up procedures *(Welsch et. al.; 1992: 1).*

When management of a concern plans for profit for certain period of time, it is called profit planning. "It is defined as an estimation and predetermination of revenues and expenses that estimate how much income will be generated and how it should be spent in order to meet investment and profit requirement. In the case of institution operation it presents a plan for spending incomes in manner that does not result in a loss." Explaining the use of budget and profit plans they further mention once developed managers know that when actual expenses exceed budget limitations there may be problems. The profit plan tells managers how much money remains to be spent in each expense category. Profit plan along with actual accounting information, becomes the basis for developing the next fiscal (accounting) years' budgets *(Jack and Raymond; 1998: 133).*

The profit planning is used the development and acceptance of objective and goals and moving an organization efficiently to achieve the objectives and goals. It is not a separate technique that can be thought of operated independently of the total management possess. Rather than broad concept of profit planning entails an integration of numerous managerial approaches and techniques.

Profit planning is played vital role in management of an organization and it is guided with some principles and proposes. The main principles and purposes of profit planning are as follows *(Kellar and Ferrara; 1992: 389).*

a) To provide of realistic estimate of income and expenses for a period and of the financial position at the close of the period, detailed by areas of management responsibility.
b) To provide a co-ordinate plan of action which is designed to achieve the estimates reflected in the budget.
c) To provide a comparison of actual results with those budgeted and an analysis and interpretation of deviation by areas of responsibility to indicate courses of corrective action and to lead to improvement in procedures in building future plans.
d) To provides a guide for management decision in adjusting plans and objectives an uncontrollable conditions change.
e) To provides a ready basic for making forecasts during the budget period to guide management in making day to today decisions.

Comprehensive profit planning is a new term in literature of business. It is defined as a process designed to help management effectively perform significant phase of the planning function. The profit planning model includes development and application of broad and long range objectives of enterprise, specification of enterprise goals, development of long range profit plan in broad terms, specification of tactical short range profit plan detailed by assigned responsibilities (like division, department, projects) and follow up procedures.

2.1.3 Decision Making on Profit Planning & Control

a. Manipulation of inflows
b. Manipulation of outflows
c. Generation of Profit

Inflows Mean Money Medical Machine Managed Manipulation Outflow goods services. To attain long range objective of an organization (to maximum profit or return on investment), management has to take proper decision on

manipulation of inflow and outflow through management process (planning, coordinates, activating and control).

Planning Inflow and Outflows of and Enterprises

Managerial Manipulation of Inflow Outflow People Capital Material Products Services Contribution Planning & Control Enterprises Operation Planning Decision Activating Decision Control Follow up.

Profit Investment Return on Investment

To attain long range objective of an organization (to maximum profit or return on investment), management has to take proper decision on manipulation of inflow and outflow through management process.

Decision Must Show Self Confidence

Decision making requires

a. Courage
b. Imagination
c. Creation
d. Seize of positive opportunity
e. Escape of the on set of decline

Decision Making Involves

a. Manipulation of the relevant controllable variables
b. Taking advantages from the situation of relevant non controllable variables

Controllable Variables

These variables that can be actively planned and manipulated by management decision.

Uncontrollable Variables

Those variables that cannot be manipulated or influenced by managerial decisions. They are external to business environment.

2.2 Importance and Limitation of Profit Planning

Importance and limitation of any subject help make clear their concept. Keeping the fact in mind, the researcher is going to deal about importance and limitation of profit planning in the present section.

2.2.1 Importance of Profit Planning

Profit planning is a base of the management process. Management requires a variety of information to plan, to control and to make decision. The information and guidance are given by profit planning and management & profit planning are closely inter-linked. Profit planning is very important to any business organization. The following main arguments are usually given for profit planning and control *(Welsch; 1992: 60):*

1. It forces early consideration of basic policies.
2. It requires adequate and sound organization structure; that is, there must be a definite assignment of responsibility for each function of the enterprise.
3. It compels all members of management from the top to down to participate in the establishment of goals and plans.
4. It compels departmental managers to make plans in harmony with the plans of other departments and of the entire enterprise.
5. It requires that management put own in figures what is necessary for satisfactory performance.
6. It requires adequate and appropriate historical accounting data.
7. It compels management to plan for the most economical use of labour material and capital.
8. It instills at all levels of management the habit of timely, careful, and adequate consideration of the relevant factors before reaching important decisions.
9. It reduces cost by increasing the span of control because fewer supervisors are needed.

10. It frees executives from many day-to-day internal problems through predetermined policies and clear-cut authority relationship. It there by provides more executive time for planning and creative thinking.
11. It tends to remove the cloud of uncertainty that exists in many organizations, especially among lower levels of management, relative to basic policies and enterprise objectives.
12. It pinpoints efficiency and inefficiency.
13. It promotes understanding among members of management of their co-workers' problems.
14. It forces management to give adequate attention to the effect of general business conditions.
15. It forces a periodic self-analysis of the company.
16. It aids in obtaining bank credit; banks commonly require a projection of future operations and cash flows to support large loan.
17. It checks progress or lack of progress toward the objectives of the enterprise.
18. If forces recognition and corrective action (including rewards).
19. It rewards high performance and seeks to correct unfavourable performance.
20. It forces management to consider expected future trends and conditions.

2.2.2 Limitations of Profit Planning

Profit is primary measure of operational efficiency of any business organization. Profit do not just happen, profit are managed which is know as profit planning. Profit planning is one of the most important management tools which is used to plan and control business organization. But profit planning has some argument as limitations.

The following main arguments are usually given against profit planning and control *(Welsch; 1992: 42).*

1. It is difficult, if not impossible, to estimate revenues and expenses in our company realistically.

2. Our management has no interest in all the estimates and schedules. Our strictly informal system is better and works well.
3. It is not realistic to write out and distribute our goals, policies and guidelines to all the supervisors.
4. Budgeting places too great a demand on management time, especially to revise budgets constantly. Too much paper work is required.
5. It takes away management flexibility.
6. It creates all kinds of behavioural problems.
7. It places the management in a straitjacket.
8. It adds a level of complexity that is not needed.
9. It is too costly, aside from management time.
10. The managers, supervisors, and other employees hate budgets.

2.3 Development of Profit Planning

The preceding section gives an overview of a comprehensive profit planning. The initiating management decisions, in developing the plan were the statements of broad, objectives, specific goals, basic strategies, and premises. Following those activities and decision, the strategic (long range) and tactical (short range) profit plans are developed. These profit plans are based on a structured planning process that includes a series of sequential steps. The end result is called a comprehensive profit plan (Welsch; 1992: 171). Development of profit planning relates about sales plans, production plan, materials purchase budget, labour budget, overhead budget, capital expenditure and capital addition budget for strategic (long range) as well as tactical (short range).

2.3.1 Sales Plan

Sales plan is the starting point in the proportion of the comprehensive profit planning and control. All the other plans and budgets depend upon the sales budget. The budget is usually presented both in units and dollars of the sales revenue or sales volume. The preparation of sales plan is based upon the sales

forecast. A variety of methods are used to forecast the sales for the planning period *(Arthur and Meir; 1970: 684).*

The sales plan should be worked out on a sound and reasonably detailed basis. It should reflect seasonal influences and any anticipated irregularities in sales. It should be broken down not only into time periods but also into geographical or a responsibility area by the use of sales quotes. A well developed sales plan is generally built up on a quota basis in the first place. So, that the double check by individual quota on total plan is inherent in the building. In a multi-plant situation, where there is a choice of manufacturing product items in more than one plant, the geographical distribution of sales is of special importance for production planning. Adequate sales planning is basic fundamental to profit planning program *(William; 1989: 502).*

Unless there is a realistic sales plan, partially all other elements of a profit plan will be out of writer with reality. The sales plan is the foundation for periodic planning in the firm because practically all other enterprise planning is built on it. The primary source of cash in sales; the capital additions needed the amount of expense to be planned, the manpower requirements, the production levels and other important operational aspects depend on the volume of sales. In harmony with the comprehensive profit plan, both strategic (long-term) and tactical (short-term) sales plans must be developed. Thus one commonly observes a five years strategic sales plan many management decision commit a large amount of resources involving a life span of many years. Basic strategic and major moves often involve irreversible commitments of resources and long time span *(Welsch.; 1992: 139).*

The strategic and tactical sales plans have three distinct parts (i) the planned volume of sales at the planned sales price per unit for each product, (ii) the sales promotional plan (advertising and other promotional costs) and (iii) the sale (distribution) expenses plan (Welsch.; 1992: 139). The primary purpose of

sales plan are (a) to reduce uncertainty about revenues, (b) to incorporate management, judgements and decisions in to the planning process (e.g. in the marketing plans), (c) to provides necessary information for developing other elements of a comprehensive profit plan, and (d) to facilitate management's control of sales activities *(Welsch ; 1992: 172).*

2.3.1.1 Sales Planning and Forecasting

Sales planning and forecasting often are confused. Although related, they have distinctly different purposes. A 'forecast' is not a plan; rather it is a statement and/or a quantified assessment of future conditions about a particular subject (e.g. sales revenue) based on one or more explicit assumptions. A forecast should always state the assumption upon which it is based. A forecast should be viewed as only one input in to the development of a sales plan. The management of a company may accept, modify, or reject the forecast. In contrast, a 'sales plan' incorporates management decisions that are based on forecast, other inputs, and management judgements about such related items as sales volume, prices, sales efforts, production, and financing *(Welsch; 1992: 172).*

The short-term sales forecast provides the base for the current years sales plan and finished goods inventory plan. At the same time the influence of the long-term sales forecast is reflected in the capital expenditure plan and in the finished goods inventory plan. The long-term forecast serves at what might be called the anchor end of the finished goods inventory plan. Since inventory at the end of this year is the beginning inventory for next year business it is necessarily influenced by the long-term sales thinking as well as the current year's short-term forecast. The long-term sales forecast provides the base for developing, in rough out line, the capital expenditure plan. The portion of the plan falling within the current year is reflected in the capital expenditure budget *(William; 1989: 502).*

It is important to make a distinction between the sales forecast and the sales plan primarily because the internal technical staff should not be expected or permitted to make the fundamental management decisions and judgements implicit in every sales plan *(Welsch; 1992: 172).*

2.3.1.2 Strategic and Tactical Sales Plan

As a practical approach, a company may schedule completion of the strategic (long-term) sales plan as one of the first steps in the overall planning process. For example, a company operating on a calendar year may complete a long-term sales plan at least in tentative form, by the end of July because this gives sufficient lead time for interim considerations essential to development of next year's comprehensive short-term profit plan during the latter part of the proceeding calendar year. Long-term sales plans are usually developed as annual amounts. The long-term sales plan uses broad grouping of products (product lines) with separate consideration of major and new products and services. Long-term sale plans usually involve in depth analyses of future market potentials, which may be build up form a basic foundation such a population changes, state of the economy, industry projections, and finally company objectives. Long-term managerial strategies would affect such areas as long-term pricing policy, development of new products, and innovations of present products, new directions in marketing efforts, expansion or changes in distribution channels and cost patterns. The influence of managerial strategy decisions is explicitly brought to bear on the long-term sales plan primarily on a judgemental basis *(Welsch et. al.; 1992: 173).*

Tactical sales plan is a short-range sales plan that is prepared for a year in the future. According to Welsch, "A common approach used for short time horizons in a company is to plan sales for twelve months in to the future, detailing the plan initially by quarters and by months for the first quarter. At the end of each month or quarter throughout the year, the sales plan is restudied and revised by adding a period in the future and by dropping the period just

ended. Thus, tactical sales plans are usually subject to review and revision on a quarterly basis. The short-term sales plan includes a detailed plan for each major product and for groupings of minor products. Short-term sales plans are usually developed in term of physical units (or jobs) and in sales and/or service dollars. Short-term sales plan must also be structured by marketing responsibility (e.g. by sales districts) for planning and control purposes. Short-term sales plan may involve the application of technical analyses; however, managerial judgement plays a large part in their determination. The amount of detail in a tactical sales plan is a function of the company's environment and characteristics. A short-range sales plan should include considerable detail where as a long range plan should be in broad term *(Welsch et. al.; 1992: 174).*

2.3.1.3 Developing a Comprehensive Sales Plan

For developing a comprehensive sales plan, generally following steps should be taken.

Step Ist : Develop management guidelines for sales planning.

Step IInd : Prepare sales forecast.

Step IIIrd : Assemble relevant data.

- Manufacturing capacity.
- Sources of raw materials and supplies.
- Availability of key people and labour force.
- Capital availability.
- Availability of alternatives distribution channels.

Step IVth : Develop strategic and tactical sales plans.

Step Vth : Consideration of alternatives.

Step VIth : Develop pricing policies.

Step VIIth : Develop product line consideration.

Step VIIIth : Price cost volume consideration.

2.3.1.4 Methods of Projecting Sales

Following four methods are used in projecting sales (Welsch; 1992: 155).

1. Judgemental Methods

- Sales force composite,
- Sales division supervisors composite,
- Executive opinion method.

2. Statistical Methods

- Economic rhythm method,
- Cyclical sequence method,
- Special historical analogy,
- Cross out method.

3. Special Purpose Methods

- Industry analysis,
- Product-line analysis,
- End-use analysis.

4. Combination Methods

2.3.2 Production Plan

When the sales plan is completed, the next step in building the short range profit plan for superior manufacturing company is to develop a production plan. The production plan involves determining the number of units of each product that must be manufactured to meet planned sales and maintain the planned inventory levels of finished goods. Planning production requirements necessitates another decisional input, that is the management decision about inventory levels of finished goods that are to be planned *(Welsch et. al.; 1992: 136).*

Production planning and scheduling are factory functions involving determination of the amount of goods to produce and production timing; therefore the production plan is the primary responsibility of the manufacturing vice-president. It is prepared on the basis of sales budget, plant capacity, opening inventory of finished goods, required closing inventory of finished goods and production policy of management.

Once sales and inventory requirements have been established, the logical first step in the production area is a facility survey. This survey should determine that all planned produced on existing or contemplated equipment and that they can be made in the volumes required. In this initial stage availability of labour supply and skill are considered. Bottlenecks caused by lack of skills or equipments are frequently uncovered. At this point decisions must be made either to eliminate bottlenecks or to reduce planned volume *(William; 1989: 508).* Economic batch quantity delivery schedules, seasonal conditions, optimum utilization of plant capacity, reduction of bottlenecks such as shortage of manpower, materials etc., stock of requirements; and work in progress are also considerable factor of the production planning.

This entails the development of the policies about efficient production levels, use of productive facilities and inventory re-levels (finished goods and work-in-process inventory). The quantities specified in the marketing plan, adjusted to conform to production and inventory policies, give the volume of goods that must be manufactured by product and interim time period. Thus, the production budget can be represented in this way: production requirement = sales volume ± goods inventory change *(Welsch et. al.; 1992: 210).*

The production budget specifies the planned quantity of goods to be manufactured during the budget period. To develop the production budget, the first step is to establish policies for inventory levels. The next step is to plan to total quantity of each product that is to be manufactured during the budget

period. The third step is to schedule this production by interim period. A complete production plan should shown budget data classified. By (a) products to be manufactured, (b) interim time periods; and (c) activities of each responsibility centre in the manufacturing process *(Welsch et. al.; 1992: 212).*

2.3.2.1 Responsibility for Production Planning

The completed marketing plan should be given to the manufacturing executive who is responsible for translating it into a production program consistent with managerial policies and subject to certain constraints. Planning, scheduling and dispatching of the actual production throughout the year are functions of the production department; therefore, it is essential that the production managers perform responsibility for the planning and control of these functions. These managers have firsthand knowledge of the plant and personnel capacities, availability of materials and production process. Although responsibility rests directly upon the production managers, top management policies must be considered in such matters as inventory levels, stability of production and capital additions (plant capacity) *(Welsch et. al.; 1992: 211).*

2.3.2.2 General Consideration in Planning Production and Inventory Level

The production plan does not aim to set the precise amounts and timing of actual production during the budget period. Ruther, the production plan represents the implications of planned sales volume for planned production volume as a basis for planning the various aspects of the manufacturing function plant capacity requirements, direct material and component requirements, timing of purchases, direct labour requirement and costs and factory overhead. The production budget should be developed in terms of quantities of physical units of finished goods. Therefore, when it is possible to plan sales volume by units as well as by dollar amounts, production budgeting is simplified. To develop the production plan, manufacturing executives must resolve the problem of coordinating sales, inventories, and production so that the lowest possible overall cost results. The importance of coordination of production planning cannot be overemphasized, because it affects so many

decisions relating to cost, capital commitments, employees, and so on. Decisions required to develop the production plan include the following:

1. Total production requirements (by product) for the budget period.
2. Inventory policies about levels of finished goods, work-in-progress and the costs of carrying inventory.
3. Plant capacity policies, such as the limits of permissible departures from a stable production level throughout the year.
4. Adequacy of manufacturing facilities (expansion, contraction of plant capacity).
5. Availability of direct materials, purchased components, and labour.
6. Length of the processing time.
7. Economic lots and runs.
8. Timing of production throughout the budget period by responsibility centres *(Welsch et. al.; 1992: 213).*

2.3.2.3 Developing the Production Plan

Production managers must translate the quantities in the sales budget into unit production requirements for the budget period for each product while considering management inventory policies. The budgeted production for the budget period has been determined; the next problem is prorating this producing by interim periods during the budget year. Interim production must be planned to (1) provide sufficient goods to meet interim sales requirements, (2) keep interim inventory levels within policy constraints and (3) manufactured the goods as economically possible (Welsch et. al.; 1992: 213).
Generally, the following table method is used to obtained the planned production of a business concern.

Requirement for sales (in units)	XXX
Add; desired final inventory level of finished goods	+XXX
Total required production	XXXX
Less; opening stock of finished goods	-XXX
Planned production for the year	XXXX

2.3.2.4 Setting Inventory Policy

In most business, inventories represent a relatively high investment and may have a significant impact on the major functions of the enterprise and its profit. If the level of inventory is greater than requirement, it is a sign of under utilization of their fund and cost of capital burden. If the level of inventory is lower than requirement it looses the opportunity of profit by unsuccess to fulfil of the market demand. So, inventory and requirement of production must be at balance position. In other word, the objectives of inventory policies should be to plan the optimal level of inventory, investment and through control to reasonably maintain these optimal levels.

To determine inventory polices for finished goods, management should consider these factors *(Welsch et. al.; 1992: 220):*

1. Quantities (in units) needed to meet sales requirements. Resolving this problem entails consideration of the sales budget and seasonal demand. The sales department executives should be directly involved in this problem.
2. Perishability of items.
3. Length of the production period.
4. Storage facilities.
5. Adequacy of capital to finance inventory production some time in advance of sales.
6. Distribution time requirement.
7. Cost of holding inventory. Frequently there are numerous and significant costs connected with stocking large quantities of goods. The principle holding costs involved are labour, insurance, taxes, rent, depreciation, transportation, and handing.
8. Protection against district material and component shortages.
9. Protection against labour shortages.
10. Protection against materials and parts price increases.

11. Risks in involved in inventory:
    - Price declines,
    - Obsolescence of stock,
    - Casualty loss and theft,
    - Lack of demand,
    - Customer return policies.

2.3.2.5 Setting Production Policies

Seasonal sales are typical in most companies. Yet production efficiency is usually enhanced by relatively by stable production levels. In many companies where sales of the primary product are seasonal, developing new products that can be stored or that have inverse seasonal pattern stabilizes production levels. Inventory fluctuation provides a tempting method of levelling production, yet as previously discussed, certain pitfalls should be considered. Stabilization of production is desirable for a number of completing reasons and generally results in significant reductions of costs and improvements in operations. The advantages of stable production levels can be outlined as follows *(Welsch et. al.; 1992: 223):*

1. Stability of employment, resulting in:
    - Improved morale and hence greater worker efficiency,
    - Less labour turnover,
    - Attraction of better employees,
    - Reduction of expense for training new employees.

2. Economic in purchasing raw materials and components as a result of:
    - Availability,
    - Volume discounts,
    - Simplified storage problems,
    - Smaller capital requirements,
    - Reduced inventory risk.

3. Better utilization of plant facilities, which tends to:

- Reduce the capacity required to meet peak seasons.
- Avoid the capacity.

2.3.3 Material Purchase and Usage Budget

2.3.3.1 Concept of Materials Purchase Budget

After having the concept of sales plan and production plan the next step in the budget process involves the determination of material purchase and usage budget. The determination of materials usage leads to the solution of the problem of when and how much to purchase of each material. Material purchase and usage budget demonstrates the build up of the quantities of each materials to be used by quarters, based on the production budget. The material cost is also considered in material purchase budget. Material budget should be also budgeted by types of raw material and parts, by user responsibility, by interim period and by types of finished goods.

Ruthmen viewed "after the sales and production has estimated, the next step's to prepare material purchase budget, when the production budget is completed than the requirement of raw materials and components to be used in the process of manufacturing the finished products could be estimated. A purchase budget gives the details of materials purchase to be made in the budget period *(Ruthmen; 1994: 5).*

A comprehensive profit planning and control program includes planning and controlling raw material and component used in the manufacturing of finished products. Adequate co-ordination and balance should be planned and controlled in between (1) factory requirements for raw materials, (2) raw materials inventory levels, and (3) purchase of raw materials.

To assure that right amounts of raw materials will be on hand at the time required and to plan for the costs of such materials, it is essential that the

tactical (short-term) profit plan includes (1) detailed budget specifying quantity and cost of materials required and (2) a related budget of raw materials purchase. Thus planning raw materials usually requires four sub budget namely, (1) material budget, (2) purchase budget, (3) materials inventory budget, and (4) cost of materials used budget *(Welsch et. al.; 1992: 211).*

1. Material Budget

This budget specifies the planned quantities of each raw materials and part required for planned production. It should specify by time, by product, and by using responsibility.

2. Purchase Budget

The material budget specifies the quantities and timing of each raw materials need therefore a plan for material purchase must be developed. The purchases budget specifies the estimated quantities of raw materials and parts to be purchased and their estimated cost as well as delivery dates.

3. Material Inventory Budget

The budget reports the planned levels of raw materials inventory items of quantities and cost. The difference in units between materials requirements as specified in materials budget and the purchase budget is reflected as in increases or decreases in the inventory budget.

4. Cost of Materials Used Budget

This budget reports the estimated cost of the materials planned for the materials budget observe that the materials budget cannot be costed unit the planned cost of purchases. It specifies the planned cost of the materials and parts that will be used in the production process.

2.3.3.2 Materials and Parts Inventory Policies

The quantity differential planned between the materials and parts budget and the purchases budget is accounted for by the change in materials and parts

inventory levels. As with the finished goods inventory budget, with respect to sales and production, the materials and parts inventory budget provides a cushion between materials and parts requirements and purchases. If materials and parts requirements are seasonal, a stable materials and parts inventory level means that purchases must exactly parallel factory material and parts requirement. Yet, in the same case, purchase can be at a uniform level only if inventory is allowed to absorb variations in materials and part requirements. The optimal purchasing plan will generally be between these two extremes. The timing of purchases will depend on inventory policies. The primary consideration in setting inventory policies for materials and parts are:

1. Timing and quality of manufacturing needs.
2. Economics in purchasing through quantity discounts.
3. Availability of materials and parts.
4. Lead time (order and delivery).
5. Perishability of materials and parts.
6. Storage facilities needed.
7. Capital requirement to finance inventory.
8. Costs of storage.
9. Expected changes in the cost of materials and parts.
10. Protection against shortages.
11. Risks involved in inventories.
12. Opportunity costs (inadequate inventory) (Welsch et. al.; 1992: 243).

2.3.3.3 Purchasing Policy

Purchasing is the most important function of materials management as the moment an order is placed for the purchase of materials, a substantial part of the company's finance is committed which affects cash flow position of the company. So, the purchasing policy should be included the answer of some question like, what to purchase?, when to purchase ?, where to purchase ?, from where purchase ?, how much to purchase ?, and at what price to purchase?

Management policy with respect to purchases and inventory should be specified. The two basic timing factors are (i) how much to purchase at a time and (ii) when to purchase (Welsch et. al.; 1992: 244). To solve the first question (How much to purchase at a time), there is a well-known approach. The approach is known as economic order quantity 'EOQ'. An economic order quantity is the number of units per order to be purchase that will resulting in the lowest total of order costs and carrying cost of a annual's supply of the product. Such as the quantity seeks to balance the cost of inventory acquisition the cost of inventory possession.

For the calculation of 'EOQ', the following formula is used:

$$EOQ = 2AOC$$

Where,

A = Annual quantity used in units

O = Average annual cost of placing an order

C = Annual caring cost of one unit in inventory for one year (e.g. storage insurance, return as investment in inventory).

Another approach which is a recent development in materials' and parts' inventory control is called Just-in-time (JIT), purchasing and manufacturing. Its primary objective is to minimize inventory level and the resulting cost. In this approach, materials and parts are not purchased until needed for production, there by minimizing inventory-holding costs. In such an approach, it is critical 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 profit planning and control (PPC) purposes (Welsch et. al.; 1992: 245).

2.3.4 Direct Labour Budget

2.3.4.1 Concept of Direct Labour Budget

Direct labour is all labour expended in altering the construction, composition, confirmation or condition of the product. In other word, it is that labour that can be conveniently identified or attributed wholly to a particular job, product

or process or expended in converting raw materials into finished goods. It includes payment made to labour engaged on the actual production of the product or in carrying out of an operation or process, labour engaged in aiding the manufacturing by way of supervision, maintenance, tool setting, transportation of material and inspectors, analysist etc. Specially required for such production. But wages paid to supervisors, inspectors etc. is not direct labour, can be treated as direct labour if they are directly engaged on specific product or process and they spend their time on it can be directly measured without much of an effort. Similarly where the cost is not significant like the wages of trainees or apprentice, their labour though directly spent on a product is not treated as direct labour. After having the concept of direct labour the researcher is going to recapitulate the concept of 'direct labour budget'. Generally a plan about the direct labour is called the 'direct labour budget' that is prepared after completed the production budget. The direct labour budget is developed in a Manama similar to that of the material purchase budgets. The main difference lies in the fact that labour is not purchased and stored in inventory, as raw materials are direct labour is used at the time of purchase (i.e. it is incurred only at the time of production). Thus, to develop the direct labour input (i.e. incurred), it is necessary only to know the amount of time required by production departments and the wage rate prevailing in the production department.

Welsch views, the direct labour budget includes the planned direct labour requirements necessary to produce the types and quantities of outputs planned in the production budget. This budget may given details about direct labour cost are about both direct labour hours cost. Planning and controlling labour cost involve major and complex problem areas: (a) personnel needs, (b) re-measurement, (c) training, (d) job description and evaluation, (e) performance measurement, (f) union negotiations and (g) wage and salary administration.

1. Labour generally classified as direct and indirect. Direct labour cost includes the wages paid to employees who work directly on specific

productive out put. As with direct material costs, labour costs that can be directly traced to z.

2. Estimate ratios direct labour cost to some measure of output that can be planned realistically.
3. Develop personnel tables by enumerating personnel requirements (including) for direct labour in each responsibility centre.

2.3.4.2 Planning Standard Labour Time

An important function of industrial engineers is to develop standard labour time for various operations and products. In some cases, it is impractical to estimate direct labour time expect in terms of averages based on experience. The following four approaches are commonly used for planning standard labour time.

1. Time and Motion Studies

There studies are usually made by industrial engineers. They analyze the operations required on a product (by cost centres). By observation (and by actual timing with a stop watch), a standard time for each specific operation is determined. The industrial engineer must decide (frequently along with the union) whether the fastest, slowest, or average employees' time should be used. Never the time and motion studies can provide reliable information about the labour time needed to perform each specific operation. The results of time and motion studies can provide basic input data for developing the direct labour hours needed to meet planned production.

2. Standard Costs

If a standard cost accounting system is used, careful analyzes of direct labour hour requirements per unit of production will generally have been made. In such cases, the standard labour time per unit of product used to derive labour hour requirements.

3. Direct Estimate by Supervisors

Some companies ask the manager of each productive operation to estimate the direct labour hours required for the planned output. In making such estimates, the manager must rely on (1) Judgement, (2) recent past performance of the department, (3) assistance from the next level of management, and (4) technical staff personal.

4. Statistical Estimates by a Staff Group

Cost accounting records of past performance usually provide useful information for converting production requirements to direct labour hours. This approach is frequently used for producing departments that process several products simultaneously. The historical ratio of direct labour hours to some measure of physical output is computed and then adjusted for planned changes in the responsibility centre. The accuracy of this method depends on the reliability of the cost records and the uniformity of the production process from period to period. However, it is questionable because past in efficiencies will often be projected into the future. Even though some other method of estimating direct labour hours in used historical ratios of direct labour hours to productive output are frequently good checks on the accuracy of other methods used *(Welsch et. al.; 1992: 282).*

2.3.5 Overhead Budgets

2.3.5.1 Concept of Overhead Budget

Cost may be divided into two portions direct and indirect. The indirect portion of total cost is overhead. Which is the aggregate of indirect material, indirect labour and indirect expenses? Overheads comprise all expenditure incurred for or in connection with the general organization of the whole or part of the undertaking i.e. the cost of operating supplies and services used by the undertaking including the maintenance of capital assets. There are three main types of the overhead namely, manufacturing/ factory overhead, selling and distribution overhead and office and overhead.

After having the concept of the overhead, the researcher is going to recapitulate the concept of overhead budget. Welsch viewed, "Expenses planning should not focus on decreasing expenses, but rather on better utilization of limited resources. Viewed in this light, expense planning and control may cause either decreased or increased expenditures. Expenses planning and control should focus on the relationship between expenditures and the benefits should be viewed as goals, and sufficient resources must be planned to support the operating activities essential for their accomplishment *(Welsch et. al.; 1992: 302).*

The overhead budget should be in detail for each responsibility centre and by interim time period. The budget can be divided into three sub-budget namely, manufacturing factory overhead budget, selling distribution expenses budget, and office and administrative, expenses budget.

2.3.5.2 Manufacturing/Factory Overhead Budget

Manufacturing overhead is that part of total production cost not directly identifiable with (traceable to) specific products or jobs. Manufacturing overhead consists of (1) indirect material, (2) indirect labour (including salaries), and other miscellaneous factory expenses; such as taxes, insurance, depreciation, supplies, utilities and repairs. Manufacturing overhead includes many dissimilar expenses; therefore, it causes problems in the allocation of those cost to products. Since there are many different types of expenses, control responsibility often widely diffused. For example, such items are depreciation, taxes, and insurance are usually not subject to direct control by factory managers, but rather by higher level management (Welsch et. al.; 1992: 307).

Manufacturing overhead/factory overhead budget gives an estimate of the worker overhead expenses to be incurred in a budget period to achieve the production target. The budget includes the cost of indirect material, indirect

labour, and indirect worker expenses. The calculation of the manufacturing overhead is made using the following methods.

Indirect materials	XXX
Add: Indirect labour	+XXX
Add: Indirect Worker expenses	XXX
(Indirect Factory cost)	
Total manufacturing overheard	XXX

Manufacturing overhead budgets are developed immediately of let the production budget, as tentatively approved, has been converted to expected out put (however measured) for each producing and service department in the factory (Welsch et. al.; 1992: 306). When developing the manufacturing overhead budget, the following steps should be taken.

Step 1 **:** Translate the requirements specified in the production plan in to output in each department.

Step 2 **:** Plan departmental overhead expenses.

Step 3 **:** Allocate the planned departmental expenses to the producing department.

Step 4 **:** Allocate the producing department expenses to be products the product.

After these above steps, per unit overhead rate for each product could be computed and by adding the direct material cost and indirect labour cost for each product. The position is in to compute the cost of goods manufactured. The budget may be classified into fixed cost and semi variable cost. It can be broken into department overhead budget to facilitate control. In preparing the budget, fixed works overhead can be estimated on the basis of past information after taking into consideration the expected changes which may occur during the budget period. Variable costs are on the basis of the budget output because these expenses are bound to change with the change in output.

2.3.5.3 Selling and Distribution Overhead Budget

Selling and distribution expenses include all cost related to selling, distribution and delivery of products to customers. The expenses are not cost and are not allocated to specific product. Welsch viewed, "fundamentally, the top marketing executive has the direct responsibility for planning the optimum economic balance (for profit potential) between (1) the sales budget, (2) the advertising budget and the distribution expenses budget. Therefore profit planning and control views sales, advertising, and distribution expenses as one basic problem rather than as three separate problems. This view is logical because of the interrelationship between them (Welsch et. al.; 1992: 314). There are two type of selling expenses namely (1) sales office expenses which cover the cost of sales man and their administrative support; and (2) sales direction and promotion expenses, which cover the cost of directing the sales efforts and promotional changes such as advertising.

The distribution expenses budget should be planned by responsibility centre, district or by the products. The top marketing executive has the overall responsibility for developing the distribution expenses budgets; the promotion manager should be responsible for developing the promotion plan, and the field. Sales managers should be responsible for developing both their marketing plan and their distribution expenses budget. The budget should separately identify controllable and non controllable expenses, and these budget should be detailed by interim time period *(Welsch et. al.; 1992: 315).*

2.3.5.4 Administrative Office and Administrative Overhead Budget

Administrative expenses include those expenses other than manufacturing and distribution. They are incurred in the responsibility centres that prove supervision of and service to all factions of the enterprise, rather than in the performance of any one function. Because a large portion of administrative expenses are fixed rather than variable, the notion persists that they can not be controlled *(Welsch et. al.; 1992: 316).*

Administrative expenses budget covers the expenses incurred in framing policies, direction the organization and controlling the business operation. The budget provides an estimate of the expenses of the control office and of manager salaries. The budget can be prepared with the help of past experience and anticipated changes. Much difficulty is appeared when the planner is not experienced in developing such budget as most of the administration expenses are of a fixed nature. Although fixed expenses remain constant and are not related to salves volume in the short run, they are dependent upon sales in the long-run with a small change in output, they do not change. However, reduced by discharging the services of some member of the staff and lacking other economy measures. On the other hand with persistent increase in output or business activity, administration expenses will increase but they may lag behind business activity. According to Welsch, "It is advisable to base budgeted administrative expenses on specific plans and programs. Past experience, adjusted for anticipated changes in management policy and general economic conditions is helpful. Because most administrative expenses are fixed, an analysis of the historical record will often provide a sound basis for budgeting them *(Welsch et. al.; 1992: 317).*

2.3.6 Capital Expenditure Budget

2.3.6.1 Concept and Capital Budget

A capital expenditure is the use of funds (e.g. cash) to obtain operational assets that will (a) help earn future revenues or (b) reduce future costs. Capital expenditure includes such fixed (i.e. operational) assets as property, plant, equipment, major renovations and patents. Typically, capital expenditures projects involve large amount of cash, other resource and debt that are tied up for relatively long periods of time, capital expenditures are investments because they require the commitment benefit today to receive higher economic benefits (i.e. profit) in the future. Capital expenditure become expenses in the future as their related goods future profits from future revenues or to achieve future cost savings *(Welsch et. al.; 1992: 395).*

A major issue in planning capital expenditure is the problem of ensuring that a company has the capacity to produce, acquire, or be able to deliver the goods and services that will be needed to meet its sales and services plans *(Welsch et. al.; 1992: 632).* A major issue in control in the actual expenditure of funds is the problem of ensuring that the actual expenditures are consistent with the plans and that funds are available when the expenditures are incurred. The capital expenditure is an important part of comprehensive profit plan. The capital expenditure budget is variously referred to as the capital additions budget, plant and equipment budget, construction budget, capital outlay budget, investment budget or plant additions budgets.

The capital budgeting decisions, as already pointed out, pertain to fixed assets or long-term assets which by definition refer to assets which are in operation, and yield a return, over a period of time, usually exceeding one year. The capital budgeting decision, therefore, involves a current outlay or series of outlays of cash resources in return for an anticipated flow of future benefits *(Quirin; 1967: 2).* Capital expenditure management, therefore, includes addition disposition, modification and replacement of fixed assets. From the preceding discussion may be deduced the following basic feature of capital budgeting. (1) Potentially large anticipated benefits; (2) a relatively high degree of risk; and (3) a relatively long time period between the initial outlay and the anticipated return *(Oster; 1974: 4).* Capital budgeting is the planning of expenditure whose return will be available beyond one year time interval. It is the process of deciding in advance whether a concern should commit its resources to a project or not whose benefits would be spread over several time periods *(Jain and Narang; 1984: 231).* It may be defined as the decision making process by which firms evaluate the purchase of major fixed assets, including building, machinery, and equipment. It is part of the firms formal planning process for the acquisition and investment of capital *(Hampton; 1976: 245).*

Capital budgeting involves the entire process of planning expenditures whose returns are expected to extend beyond one year. The choice of one year is arbitrary, of course, but it is a convenient cut off point for distinguishing between kinds of expenditures *(Weston and Brigharam; 1978: 144).* Capital budgeting involves the generation of investment proposals. The estimate of cash flows for the proposals; the evaluation of cash flows, the selection of projects based upon an acceptance criterion and finally the continual revaluation of investment projects after their acceptance *(Van Horne; 1997: 148).*

A capital budgeting is the process of determining which capital investments will be undertaken. There are three stages of capital budgeting namely (i) proposal generation, (ii) analysis, and (iii) implementation. Capital budgeting is the analysis of proposal long-term investments, it is the decision making process that determines the types of plan and equipment firm will own. How much will be invested in such assets and when the expenditure will be made *(Henderson et. al.; 1995: 118).*

2.3.6.2 Method for Evaluation of Capital Budgeting

To examine the various investment proposals, the necessary information should have collected and evaluated them. The all investment proposals have some risk or quality. The investment proposals does not differ form the risk of existing investment projects of a firm and that the acceptance of any proposal or group of a investment proposal does not change the relative business risk of the firm. The investment decision will be either to accept or to reject the proposal. About the method for evaluation of capital budgeting. Van Horne suggests "we evaluate four method of capital budgeting (1) average rate of return, (2) payback period, (3) internal rate of return, and (4) net present value *(Van Horne; 1997: 149).*

A brief introduction of the above mentioned method is given below:

a. Average Rate of Return (ARR)

This accounting measure represents the ratio of the average annual profits after tax to the investment in the project (Van Horne; 1997: 149) ARR is calculated by the following formula.

ARR = Average Annual Profit (After Tax) Average Investment Over the Life of the Project × 100%

The method of evaluating proposal capital expenditure is also known as the accounting rate of return method. It is based upon accounting information rather than cash flow. The most important advantage of the method is its simplicity in calculation and it makes use of readily available accounting information. But it does not take into consideration the timing of cash inflows and out flows. The method ignores the time value of money to consider of the project evaluation. The higher the ARR is better to the firm.

1. Pay Back Period (PBP)

The pay back period of an investment project tell us the number of years required to recover our initial cash investment. It is the ratio of initial fixed investment over the annual cash inflows for the recovery period (Var Horne; 1997: 150). Pay back period is calculated by the following the formula.

Payback Period = Cost of the InvestmentNet Cash Inflow Per Year

The method is based on the idea that the original cost of investment must be recovered if the company is to remain in effective existence. The method is also simple to understand and easy to calculation. It is also ignore the time value of money.

2. Internal Rate of Return (IRR)

Because of the various short comings in the average rate of return and payback methods, it is generally that discounted cash flow methods provide a more objective base for evaluating and selecting investment projects. These methods take account of both the magnitude and the timing of expected cash flows in each period of a project life. The internal rate of return for an investment proposal is the discount rate that equates the present value of the expected cash flows with the present value of the expected inflows *(Van Horne; 1997: 150).* A discounted cash flow or time value adjusted method for appraising capital investment decision is the internal rate of return method. The IRR depends entirely on the initial outlay and the cash proceeds of the project which is being evaluated for acceptance or rejection. It is defined as the discount rate which equates the aggregate present value of the net cash inflows (cash flow after taxes) within the aggregate present value cash out flows of a project. It is represented by 'r' and calculated by the following formula.

$$A_0 = A1(1 + r) + A2(1 + r)2 + \text{----------} + An(1 + r)n$$

Where,

A_0 = The initial outlay

A_1, A_2, A_n = Stream of future net cash flows

r = Internal rate of return

If there are a number of alternative proposals, the internal rate of return of all alternatives should be compared and the alternative which gives the maximum internal rate should be selected as the most profitable one. The main difficulty of the method lies with the calculation it which will equate present value of net cash flows with that of initial cost of the project.

3. Net Present Value (NPV)

The present value method is a discounted cash flow approach to capital budgeting. With the present value method, all cash flows are discounted to

present value, using the required rate of return. The net present value is calculated by the following formula *(Van Horne; 1997: 152).*

NPV =Σ=+n0tt)Kl(At

Where,

K = Overall cost of capital

t = No. of year (no of period)

A = The stream of cash flows including initial cash outlay.

From the above formula, NPV may be defined as the summation of the present values of the cash flow after tax in each year minus the summation of present values of the net cash outflows in each year. The method has some merits (like, it explicitly) recognizes the time value of money, it considers the total benefits arising out of proposal over its life time; the method is particularly useful for selection of mutually exclusive projects.

After having a brief introduction of the four methods of capital budgeting decision, the decision criteria can be summarized the following ways:

Capital budgeting decision criteria S.N.	**Name of methods**	**Accept/Reject Rule**
1.	Average Rate of Return (ARR)	Highest/Higher the ARR is accepted and vice versa.
2.	Pay Back Period (PBP)	Lowest/lower the pay back period

2.3.7. Implementation of the Profit Plan

"After approval of a profit plan, the next step is its distribution to the center managers in the enterprise. The distribution policy should allow distribution of parts of the profit plan to middle and lower management. For example, a sales district supervisor would not be given a copy of the entire budget but should

receive those parts that apply to the sales budget, expense budget, and advertising budget for his or her district.

After distribution of the profit plan, a series of profit plan conferences should be held. The top executives comprehensively discuss the plans, expectations, and steps in implementation. At this top-level meeting, the importance of action flexibility and continuous control should be emphasized. Use of the profit plan as a guide to action and performance, directed toward attaining or bettering the goals quantified in the annual profit plan, require continuous management effort and attention.

Budget conferences should be conducted until all levels of management are reached. Managers must clearly understand their responsibilities and how their part of the profit plan fits into the overall company profit plan. These conferences should induce "profit and cost awareness" throughout management and, if conducted properly, will tend to ensure positive support for the objectives." *(Welsch, et al.; 1999: 472)*

2.3.8 Performance Report

"These reports are usually prepared on a monthly basis and follow a standardized format from period to period (but are not standardized among companies or industries). Such reports are designed to facilitate internal control by the management. They should be composed of carefully selected series of data related to each responsibility center. Fundamentally, they report actual results compared with goals and budget plans. Frequently, they identify problems that require special reports, since these reports are designed to pinpoint the efficient and inefficient performance.

The effective performance report should be:

a. Tailored to the organizational structure and locus of controllability.
b. Designed to implement the management-by-exception principle.

c. Repetitive and related to short time periods.
d. Adapted to the requirements of the primary users.
e. Simple, understandable, and report only essential information.
f. Accurate and designed to pinpoint significant distinctions.
g. Prepared and presented promptly.
h. Constructive in tone." *(Welsch et al.; 1999: 543-544)*

2.3.9 Analysis of Budget Variance

The difference between planned result and actual result is called variance. "Comparison of actual results with planned or budgeted goals has been emphasized as an integral part of the control process. A basic feature of performance report is the reporting of variances between actual results and planned or budgeted goals. If a variance is significant, a careful management study should be made to determine the underlying causes. The underlying causes, rather than the actual results, should lead to remedies through appropriate corrective action by management" *(Welsch et al.; 1999: 569).*

In PPC process variance are analyzed basically in following areas:

i. Sales Variance
ii. Material Variance
iii. Labor Variance
iv. Manufacturing Overhead Variance
v. Profit Variance

Following are the basic steps in analyzing variances:

i. Setting Standards
ii. Measurement of performance
iii. Analyzing variances
iv. Take corrective action

"Variance can be either favorable of unfavorable, depending upon whether actual results are greater or less than standard results. The major purpose of variance analysis is to enable management to measure performance against predetermined norms to seek out the causes for the standard results, and to institute action" *(Lynch and Williamson; 1983: 201).*

2.4 Review of Related Studies

2.4.1 Review of Journals and Articles

K. Murugan and Torrie F. Manivel (2009), in their article, ***"****Profit Planning of an NGO Run Enterprise Using Linear Programming Approach"* have stated that Sarvodaya sanghams as affiliates of KVIC are engaged in the production of textile products and nontextile products. These sanghams are labour intensive and use semi-automatic machineries wherever necessary. Their approach to production is making fuller utilization of locally available resources and provision of employment to the rural folk. Marketing is given secondary importance.

Dropping of product is not common in sanghams even when the production of certain items is not economically viable. It is taken as the last resort. But in the present day competitive market the damage will be heavy if they go on produce the products without considering the product marketability and profitability. Making these decisions will be a difficult one especially the present approach of "rule of thumb" to decision making. Therefore, in this study, tool linear programming is tried to find out an optimum product mix which would maximize the profit, from the production and sale of textile and non-textile products, trying to demonstrate that the use of this tool is possible and beneficial to the sanghams. In the present case at hand, four models were run and recommendations were analyzed both for textile and non-textile products. Finally suitable models which would help maximize the profit while assuring employment to the workforce, catering the needs of all existing market segments and proper utilization of existing resources.

2.4.2 Review of Thesis

Ojha (1995) has a significant contribution on the topic *"Profit Planning in Public Enterprises in Nepal: A Comparative Study of Royal Drugs Limited (RDL) and Herbs Production and Processing Company (HPPCL)".* The main objective of the study is to high light the applicability and effectiveness of profit planning in Nepalese public entireness. Regarding this broad objective, he pointed out the following specific objectives.

- To examine the practice and effectiveness of profit planning in RDL and HPPCL.
- To analyse the various functional budgets adopted in these enterprises.
- To evaluate the variance between targets and actual of the enterprises.
- To draw a picture of profit planning process adopted in these two enterprises with theoretical prescriptions. Both descriptive and analytical approaches have been applied in this research. Work by collecting the data form primary as well as secondary sources to fulfil the objectives. The study covered the period of six years from FY 2046/47 to 2051/52.

Ojha has found that overall responsibility of planning and decision making process is highly centralized in RDL whereas planning and decision making process in HPPCL is participatory to some extent.

Analyzing the data and information Ojha has pointed out the following major findings.

- Confecting role due to lock of coordination among departmental mangers in RDL.
- Inadequate authority and responsibility to planning department and red-tapism in implementation phase of profit plan in RDL.
- Inadequate planning of profits due to lack of skilled planners in both RDL and HPPCL.
- Inadequate evaluate of external and internal variables in HPPCL.

- Lengthy bureaucratic process leading delays in decision making and planning in HPPCL.
- Lack of entrepreneurship and commercial concepts in overall operation of HPPCL.

Ojha has recommended various keys to improve the profit planning system of these enterprises. Some major recommendations are:

- Identification and evaluation of external and internal variable is must to know the company's strength and weakness.
- A systematic process of comprehensive profit planning should be adopted. Clearly defined objectives, effective program to accomplish objectives, participation in decision making and planning, clearly defined authorities and responsibilities among line and staff managers, etc. should be applied.
- System of periodic performance report should be strictly followed.
- Price volume cost relationship should be taken into consideration while developing sales plan and pricing strategies.
- Communication of management policies, flexibility in implementation of planning and control program, effective supervision, cost reduction programs are the basic steps for effective operation of these enterprises.

K.C. (2000) has conducted a research on the topic, *"Profit Planning in Herb's Production and Processing Co. Ltd."* This research work is basically concerned is to highlight the current practice of profit planning and its effectiveness in herbs production and processing company limited other specified objective are:

- To examine the present profit planning premises adopted by HPPCL.
- To observe the HPPCL's profit planning on the basis of overall managerial budgeting.
- To analysis the difference between budgets and actual achievement of the HPPCL.
- To point out suitable suggestion and recommendation.

- To conduct this research, both primary and secondary source of data have been used. The time period was five years from FY 2051/52 to 2055/56 in this study.

K.C. has pointed our various finding or recommendations. Few major findings and recommendations are as follows:

Findings:

- Specific goals and objectives are not conveyed to lower level of staff and it denotes the absence of MBO principle of management.
- There is lack of proper coordination between the various responsible departments.
- There is no cost classification system. Overhead are not classified systematically and it creates problem of analyze its expenses properly.
- Absence of skilled and purely academic manpower in budgeting section, the company has unable to prepare systematic future plan.
- There is no arrangement of any accounting and management planning training by the company.
- Actual sales are very below than budgeted sales.
- There is a lack of entrepreneurship in the operation of the company.
- The company is suffering from low contribution margin and high fixed cost.

Recommendations:

- Developing of clear objectives and goals.
- Sales forecasts should be made on realistic ground. Marketing specialist should be appointed to develop effective marketing policy.
- Continuous flow of information among various level of management and various group of employees.

- Prepare material requirement, purchase budget and adequate inventory management system.
- Separate costing section should be established and developed.
- Reduce the investments in currents assets to avoid the idle working capital.
- Cost volume profit relationship should be considered while developing sales and pricing strategies.
- HPPCL should adopt systematic and scientific practice of cash budget to know the planned cash inflow, outflow and ending position by interim period for specific time span and a definite policy should be formulated to finance, the cash deficit and to utilize excess funds.
- HPPCL should try to reduce long-term loan and replacement should be made by sold it finished good inventory and reduce unnecessary fixed assets.
- HPPCL should have practice of analyzing the variance and financial performance (K. C.; 2000).

Jha (2006), has made a study on *"Impact of Budgeting on Profitability of Manufacturing Industry: A case study of Ganga Rosin and Turpentine Industry."* The objectives of the study are to examine the practice and effectiveness of profit planning in GRTI. The specific objectives of the study are as follows:

- To analyze the profit planning applied in GRTI.
- To analyze the major functional and financial plans formulated and implemented in GRTI.
- To examine the outcome of those plans in terms of achievement.
- To point out possible suggestions and recommendations to improve the performance of GRTI with the means to profit planning system.

The major findings of the study are as follows:

- The industry has not operated in full capacity. The highest capacity utilization is 76.0% recorded in the fiscal year 2062/063.
- Actual sales of Rosin are more fluctuating than Budgeted sales and Budgeted production of rosin are more fluctuating than Actual production.
- GRTI has a practice of preparing both strategic and tactical plans.
- GRTI has earned profit from the FY 2058/059 to 2062/063.
- The net profit and gross profit of GRTI are in increasing trend every year.
- Comparing net profit and gross profit, net profit is very low than gross profit, it shows over fixed cost or administration charge.
- There is positive and close correlation between budgeted and actual sales.
- GRTI was able to meet its BEP sales therefore, it was profit every year.
- GRTI has no practice of cost segregation.
- Investment in current assets is being higher than necessity, which may reduce the profitability of industry in the future.

Dhungana (2007), has conducted a study on, *"Profit Planning in Nepal Telecom Limited."* The main objectives of his study are as follows:

- To examine the practice and effectiveness of profit planning in Nepal Telecom.
- To observe the Telecom's profit planning on the basis of overall managerial budgeting.
- To recommend measures to be taken instantly and further with the identified budgeting and profit planning problems.

The main findings of the study are as follows:

- The corporation makes plan in ad-hoc basis, the goals and objectives are not adequate for the development of corporation.
- The sales plan achievement of the Nepal Telecom is satisfactory but the profit earned by Nepal Telecom is not sufficient.

- Cash budget of Telecom is not actual transaction based, it is only tentative cash flow, so it is bearing cash deficit problem.
- Overhead budget is not prepared in a scientific and systematic way. All the expenses are included in operating expenses.
- The capital expenditure budget of Telecom is very high and flexible budgeting system is not prepared by Nepal Telecom.
- There is lack of proper co-ordination between various departments and the skilled manpower is centralized.

Dangol (2008), has conducted study on *"Profit Planning in Nepal: A case study of Nepal Lever Ltd."* The main objectives of the study are:

- To examine the practices and effectiveness of Profit Planning in NLL.
- To analyze the various functional plans formulated and implemented in NLL.
- To evaluate the variance between targets and actual of NLL.
- To evaluate the profit planning process applied in NLL with conceptual perspective.
- To point out feasible suggestion and recommendation to make better of Nepalese manufacturing enterprises with speed reference to NLL.

The major findings of the study are as follows:

- General Manager with mutual cooperation of other top level managers and which the board of directors finally approves to prepare yearly budget for income and expenditure.
- The company has no planning division. It has no skilled and expert planners as well.
- The company has no practice of sales forecasting. It does not prepare sales and production plans. They are made on ad-hoc basis.
- The company is unable to appoint sufficient number of reliable agents/dealers to improve its sales performance.

- Annual capacity of producing goods is 34,750 metric tones. The capacity utilization of the company is more deviated from their standard and targeted capacity utilization from year to year.
- In NLL there is detail plan of manpower and systematic approach of labor planning. The company plans for direct hours and direct labor cost needed to produce the planned quantities of goods.

Maharjan (2009), has conducted a study on, *"Budgeting in Manakamana Darshan Private Limited."* The objective of the study is to appraise the profitability of MDPL and to suggest recommendations based upon it. The specific objectives are:

- To analyze the budget of MDPL.
- To analyze the problems faced by MDPL in terms of budget formulation.
- To analyze the cost and profit trend of the MDPL in the light of budget.
- To evaluate the deviation between overall targets and actual achievements.
- To provide suggestions for improving the budgeting problems.

The major findings of the study are:

- MDPL has not the practice of preparing comprehensive sales plan. But it prepares only target sales in totality.
- The regression analysis and straight trend line suggests that the actual sales are in increasing trend.
- The actual sales and actual purchase is positively correlated. It means purchases are made on the basis of sales.
- MDPL is not in loss from the last few years except FY 2059/060. Analysis of profit pattern shows increasing trend of profit. This shows efficiency in Budgeting and Cost Control.
- The regression equation shows that there is negative relationship between planned sales and actual sales.

Bhata (2010), has submitted a dissertation on the topic "Profit Planning in Royal Drugs Limited" this research of Mr. Bhatta was mainly concerned with the current practice of profit planning and examines that to what extent the RDL is apply profit planning system. The study covers only five years period of time from FY 2049/50 to 2053/54. Primary as well as secondary data have been used in the research reporters. The main objectives of Bhatta's research work were:

- To analyze the various functional budgets that are prepared in public enterprise of Royal Drugs Limited.
- To sketch the trend of profit or loss.
- To evaluate the variance between budgeted and actual of the enterprise.
- To examine practice and effectiveness of profit planning.

Major finding of Mr. Bhatta's research are:

- Objective of RDL are not clear, whatever it aims to minimize profits or to maximize social service is not clearly distinguished.
- There is a lack of entrepreneur ship and business in the operation of the enterprise.
- Authority and responsibilities are not clear among the department management and working managers.
- There is a more conflict and lack of co-ordination between departments.
- Responsibility counters to control of cost are not clearly defined.
- Internal and external variables providing opportunities threats and strengths and weaknesses are not identified.

Bhatta recommends as below in his research: • HMG/N intervention should not be made for functional aspect of enterprise. Management should be given full authority, responsibility and accountability for routine one major both operation.

- RDL should develop specific program to face the competition. Quality aspect of the products should be high lighted rather than price aspects.

- RDL should maintain co-ordination between production and market demand.
- RDL should improve its liquidity position raising long term capital.
- Management by objective (MBO) technique should be followed for planning to maintain co-ordination, co-operation and self-motivation among departments and employers.
- RDL should be operated on rarely commercial basis.
- Responsibility centre should be clearly defined.
- Reward on punishment system for the performance of related responsibility centre should be maintained (Bhatta; 1999).

2.5 Research Gap

The review of the above relevant literature has contributed to enhance the fundamental understanding and knowledge which is required to make study meaningful and purposive. All these research studies mentioned above are mainly concerned with planning profit but they have forgotten the role of controlling cost in profit planning process. So, this study has been conducted to evaluate the effectiveness of profit planning and controlling cost of NBBUL, by embracing all the weakness in previous thesis.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Research Design

"A research design is a specification of methods and procedures for acquiring the information needed. It is the overall operational pattern of frame work for the project that stipulates what information is to be collected, from which sources and by what procedures" *(Paul and Donald; 1999: 134)*.

The research design of this study is descriptive as well as analytical. This study is an examination and evaluation of budgeting procedure in the process of profit plan of Nepal Bitumen and Barrel Udhyog Limited. The study is closely related with the various functional budgets and other proposed accounting statements as well as the actual result over the budgets. This information is used to analyze and evaluate the profit planning system of NBBUL.

3.2 Period Covered

The study covered the period of 5 years from the fiscal year 2004/05 to 2008/09. Data were taken from NBBUL and the analysis was made on the basis of these five years' data. Both budgeted and actual data were taken since the fiscal year 2004/05 to 2008/09.

3.3 Source of Data

Both primary data and secondary were used in this study. The primary data was collected from the NBBUL staff whereas secondary data was collected from NBBUL as well as from other sources.

3.4 Data Collection Procedures

a. Primary Data

The primary data were collected from the field directly during survey period. The researcher conducted interview, discussion, and made direct observation to obtain required information.

b. Secondary Data

The secondary data were collected from the secondary sources. These secondary sources consist of two sources.

i. **Internal Sources**

- Annual general meeting report of NBBUL from the fiscal year 2004/05 to 2008/09.
- Prospectus of NBBUL
- Website of NBBUL *(www.panchakanyagroup.com)*
- Booklets etc.

ii. External Sources

- Books and publications
- Accounting & financial statistics
- Journal article, articles from newspaper.
- Local newspaper.
- Previous reports etc.

3.5 Tools Used

Different tools were used to enlighten the factual matters of NBBUL.

a) PPC Tools

- Sales budget
- Production budget
- Material budget
- Labor budget
- Overhead budget
- Income statement
- Cash Flow statement
- Balance sheet

b) Financial Tools

- Current ratio
- Quick ratio
- Total assets turnover ratio
- Capital employed turnover ratio
- Net profit margin
- Return on shareholders equity

c) Statistical Tools

- Mean
- Standard deviation
- Coefficient of variance
- Karl person's correlation coefficient
- Least square method
- Regression analysis
- T-test
- Percentage
- Multiple bar diagrams
- Pie chart
- Graph

3.6 Research Questions

The fundamental objectives of this study is to examine how far the different functional budgets were being applied as tools for profit planning and control and in what extent they impact on profitability. The research questions were designed to answer the following:

a. To what extent the profit planning was followed in NBBUL?
b. What steps should be followed to improve profit planning and control system in NBBUL?
c. What are the overall managerial problems and what suggestion can be recommended for their proper solution?

3.7 Research Variables

This research work is mainly related to the PPC process of NBBUL. Financial and physical targets for specific goals relating different types of budget and related to budgets are the main research variable of this research work. Sales, production, overhead, material, labor, income statement and balance sheet are the main research variables of present study.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

In this chapter, the researcher analyses & interprets the relevant and available data of selected company to research methodology as mentioned in previous chapter. Presentation and analysis of data is an important stage of research study. For the application of profit plan, a company should prepare numbers of plan. The primary objective of business firm is to earn profit plan. Various budgets are the tool of profit planning and control, which is widely, used controlling various functional budget and actual performance in manufacturing enterprise. This chapter is related with detailed analysis of all variables of profit planning. Data related to various budgets are presented and analyzed to know overall economic trend. The study covers the period of five years from fiscal year 2004/05 to 2008/09.

4.1 Material Purchase Plan

Raw material and its components are used in manufacturing of finished goods. This is the key concept of comprehensive profit plan and control program. The purchase of raw material for overall products by NBBUL during the research period is presented in Table 4.1 below:

Table 4.1

Raw Material Purchase

(Units in Rs.)

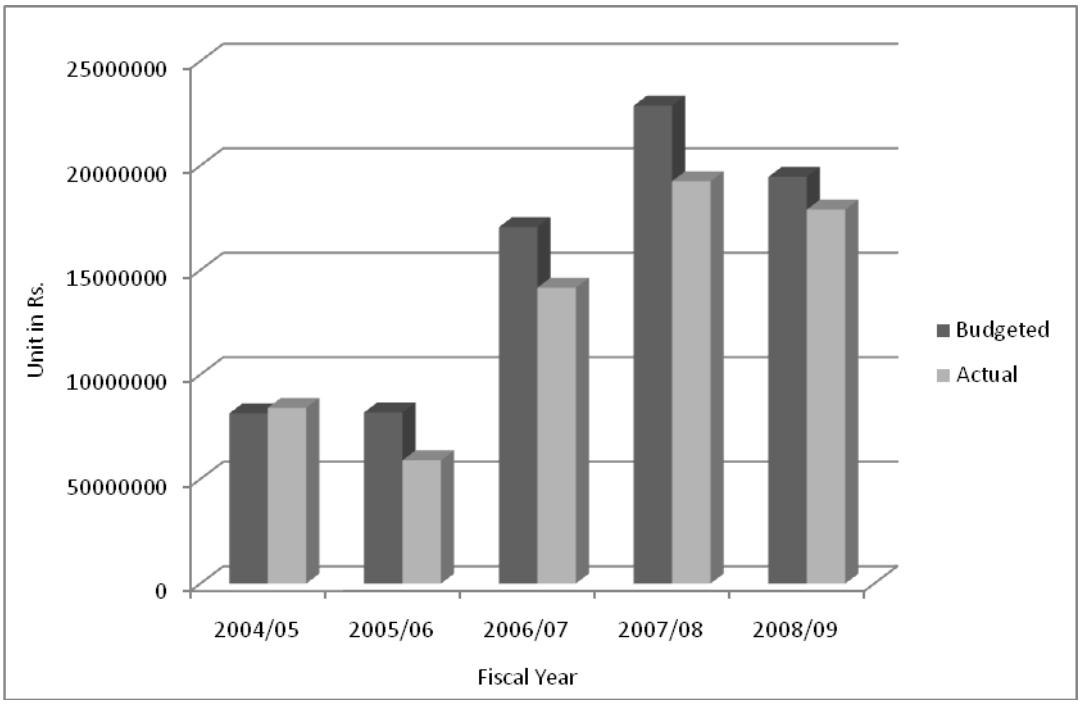
Fiscal Year	Raw Material Purchase		Incurred	Difference in		
	Budgeted	Actual	%	Rs.	%	Remarks
2004/05	81437000	84098436	103.27%	-2661436	-3.27	Unfavourable
2005/06	81871250	58973197	72.03%	22898053	27.97	Favourable
2006/07	170496000	141523192	83.01%	28972808	16.99	Favourable
2007/08	228640000	192532653	84.21%	36107347	15.79	Favourable
2008/09	194600000	178961363	91.96%	15638637	8.04	Favourable

(Source: Annual Report of NBBUL)

Above table showed NBBUL had good control over raw material purchase except in the fiscal year 2004/05 where difference was -3.27%. NBBUL incurred 103.27%, 72.03%, 83.01%, 84.21% and 91.96% of budgeted purchase as actual purchase of raw material in the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. On average, NBBUL made a purchase of 86.90% of budgeted purchase on reality which was a favorable result. NBBUL should be aware about the fluctuating market price of raw material while preparing the material purchase plan.

Figure 4.1

Raw Material Purchase



Source: Table 4.1

4.2 Expenses Plan

NBBUL has no practice of segregating cost on product wide basis. NBBUL classifies its expenses on factory overhead, administrative overhead and selling and distribution expenses. The details of actual expenses incurred by NBBUL on overall products during the research year have been listed below:

Table 4.2
Budgeted and Actual Overhead of NBBUL

(Units in Rs.)

Particulars / Fiscal Year	Budgeted	Actual	Incurred %	Difference in Rs.		Remarks %
FY 2004/05						
Factory Overhead	3096500	3222686	104.08	-126186	-4.08	UF
Administrative Overhead	5799470	5229792	90.18	569678	9.82	F
Selling & Distribution Overhead	420580	486517	115.68	-65937	-15.68	UF
Total Overhead Cost	**9316550**	**8938995**	**95.95**	**377555**	**4.05**	**UF**
FY 2005/06						
Factory Overhead	2573400	2499113	97.11	74287	2.89	F
Administrative Overhead	5545000	5160665	93.07	384335	6.93	F
Selling & Distribution Overhead	325670	201212	61.78	124458	38.22	F
Total Overhead Cost	**8444070**	**7860990**	**93.09**	**583080**	**6.91**	**F**
FY 2006/07						
Factory Overhead	2584500	2906420	112.46	-321920	-12.46	UF
Administrative Overhead	5797700	6008256	103.63	-210556	-3.63	UF
Selling & Distribution Overhead	370600	299441	80.80	71159	19.20	F
Total Overhead Cost	**8752800**	**9214117**	**105.27**	**-461317**	**-5.27**	**UF**
FY 2007/08						
Factory Overhead	3346000	2987691	89.29	358309	10.71	F
Administrative Overhead	6709550	6176527	92.06	533023	7.94	F
Selling & Distribution Overhead	405900	291932	71.92	113968	28.08	F
Total Overhead Cost	**10461450**	**9456150**	**90.39**	**1005300**	**9.61**	**F**
FY 2008/09						
Factory Overhead	3511000	3389247	96.53	121753	3.47	F
Administrative Overhead	6176527	7138656	115.58	-962129	-15.58	UF
Selling & Distribution Overhead	430000	1278756	297.39	-848756	-197.39	UF
Total Overhead Cost	**10117527**	**11806659**	**116.70**	**-1689132**	**-16.70**	**UF**

(Source: Account Department & Annual Report of NBBUL)

Above table showed both total and separate factory, administrative and selling & distribution expenses of NBBUL from the fiscal year 2004/05 to 2008/09. The total expenses incurred by NBBUL during the fiscal year 2004/05,

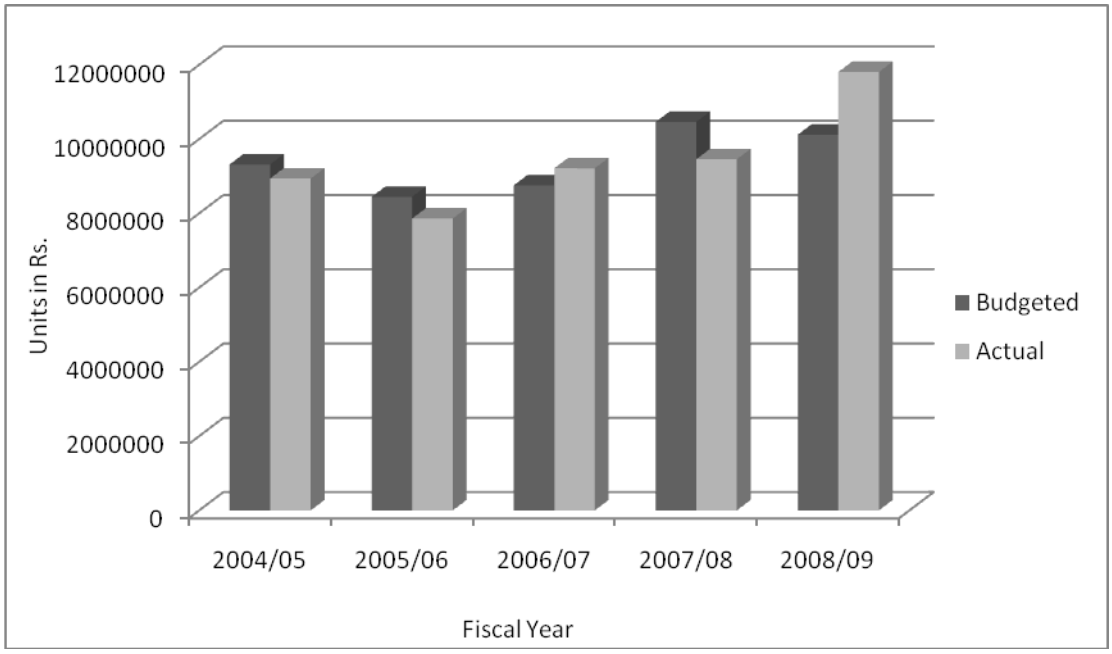
2005/06, 2006/07, 2007/08 and 2008/09 were Rs. 89,38,995, Rs. 78,60,990, Rs. 92,14,117, Rs. 94,56,150 and Rs. 1,18,06,659 respectively and the total budgeted expenses for the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 were Rs. 93,16,550, Rs. 84,44,070, Rs. 87,52,800, Rs. 104,61,450 and Rs. 101,17,527 respectively. NBBUL incurred 95.95%, 93.09%, 105.27%, 90.39% and 116.70% of budgeted expenses during the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The difference of 9.61% in the fiscal year 2007/08 and -16.70% in the fiscal year 2008/09 controlling expenses of NBBUL is in sufficient.

Table 4.2 showed as compared to other expenses that NBBUL incurred less expenses on selling and distribution which was very low except in the fiscal year 2008/09 which amounted Rs. 12, 78,756. Being the sole industry in country concerned with manufacturing bitumen, NBBUL did not budgeted more in selling and distribution expenses. All the expenses are in fluctuating trend during the research period such fluctuation can be due to employee turnover, idle time, ineffective management and others.

The company should try to maintain a good relationship between the expenses and the benefit that arises with the increase in expenses and it should control the growing ugly head of expenses otherwise in forthcoming year it will have to bear a heavy loss.

Figure 4.2

Budgeted and Actual Overhead of NBBUL



Source: Table 4.2

4.3 Direct Labor Cost Plan

NBBUL has no practice of planning direct labor hours per unit of product. The company prepares direct labor cost budget by previewing previous year record and the likely changes in coming year. It has totally ignored production and direct labor hours per unit of product. Out of 50 employees, 25 persons are involved as laborer and the rest are administrative staff. The data provided by NBBUL as concerned to direct labor cost is presented in Table 4.3 as below:

Table 4.3

Direct Labor Cost

(Units in Rs.)

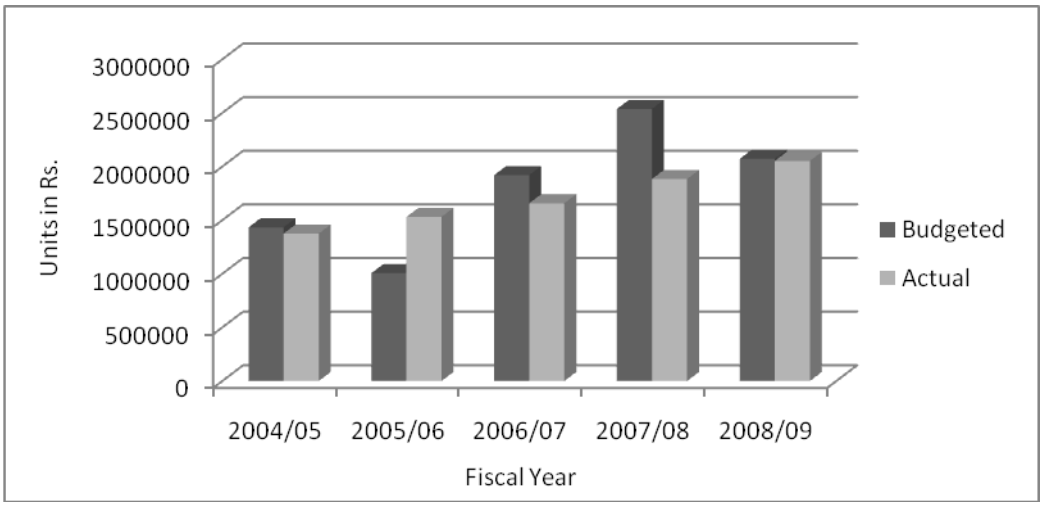
Fiscal Year	Labor Cost		Incurred	Difference in		
	Budgeted	Actual	%	Rs.	%	Remarks
2004/05	1433750	1375090	95.91	58660	4.09	Favourable
2005/06	1006250	1530871	152.14	-524621	-52.14	Unfavourable
2006/07	1920000	1657949	86.35	262051	13.65	Favourable
2007/08	2537600	1884171	74.25	653429	25.75	Favourable
2008/09	2072000	2052646	99.07	19354	0.93	Favourable

(Source: Annual Report & Account Department of NBBUL)

Difference between budgeted and actual direct labor cost of NBBUL is shown in table 4.3 above. NBBUL incurred 95.91%, 152.14%, 86.35%, 74.25% and 99.07% of planned direct labor cost as actual direct labor cost in the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. On average, 101.54% of planned direct labor cost was paid as direct labor cost on reality which was Unfavourable for NBBUL. In the fiscal year 2005/06, NBBUL paid 52.14% more than planned as direct labor cost. This is due to ignoring direct labor hour per unit and production quantity while preparing budgeted direct labor cost budget.

Figure 4.3

Direct Labor Cost



Source: Table 4.3

4.4 Production Plan in NBBUL

Short term production budget is in practice in NBBUL. The production manager prepares the production plan based upon the adequacy or availability of raw material, sales target and targeted inventory. The following tables show the planned and actual production activities from the fiscal year 2004/05 to 2008/09.

Table 4.4

Actual Production of Overall Products

(Units in Metric Ton)

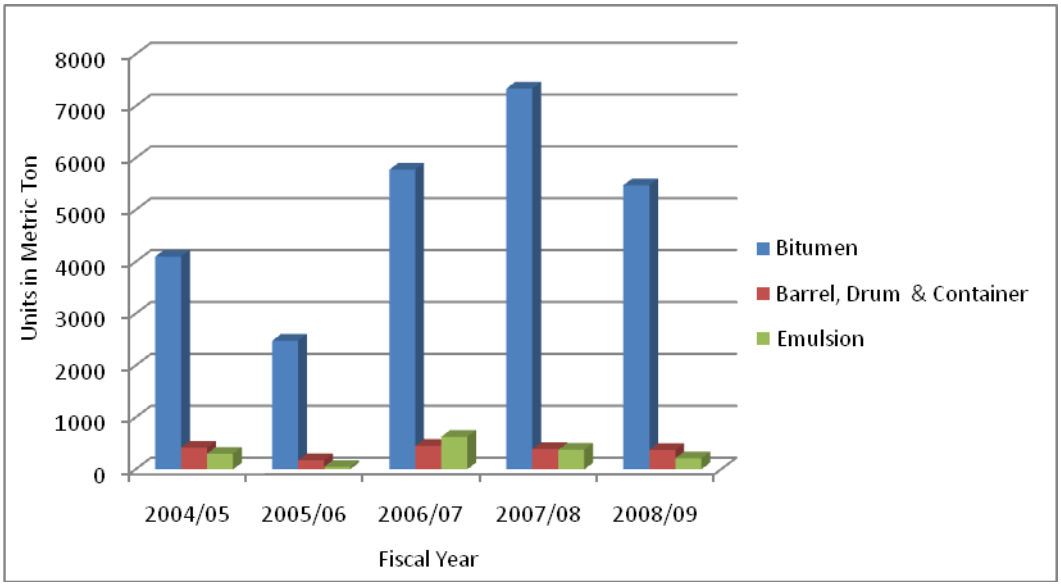
Particulars	Fiscal Year								
	2004/05	2005/06		2006/07		2007/08		2008/09	
	Ton	Ton	Change %	Ton	Change %	Ton	Change %	Ton	Change %
Bitumen	4101	2478	-39.6	5776	133	7340	27.08	5478	-25.37
Barrel, Drum & Container	419	175	-58.2	453	159	389	-14.1	372	-4.37
Emulsion	301	48	-84.1	628	1208	378	-39.8	214	-43.39
Total	**4821**	**2701**		**6857**		**8107**		**6064**	

(Source: Corporate Office of NBBUL)

The above Table 4.4 showed that in the fiscal year 2004/05 to 2008/09, the change percentage of Bitumen on actual production had ranged from -39.60% to 133%. Similarly, Barrel, Drum & Container had ranged from -58.2% to 159% whereas Emulsion had ranged from -84.1% to 1208%. The reason behind such high fluctuation was due to the remained high stock. The actual production of NBBUL was highest in the fiscal year 2007/08 (i.e. 8107 metric ton) and lowest in the fiscal year 2005/06 (i.e. 2701 metric ton). It had decreased by 2043 metric ton in the fiscal year 2008/09 as compared to the fiscal year 2007/08.

Figure 4.4

Actual Production of Overall Products of NBBUL



Similarly, the budgeted production of Nepal Bitumen and Barrel Udhyog Limited for the five fiscal year are presented in the Table 4.5.

Table 4.5

Budgeted Production of Overall Products

(Units in Metric Ton)

Fiscal Year / Particulars	2004/05	2005/06	2006/07	2007/08	2008/09
Bitumen	4785	3490	6460	8690	6240
Barrel, Drum & Container	600	350	550	540	385
Emulsion	350	185	670	530	260
Total	**5735**	**4025**	**7680**	**9760**	**6885**

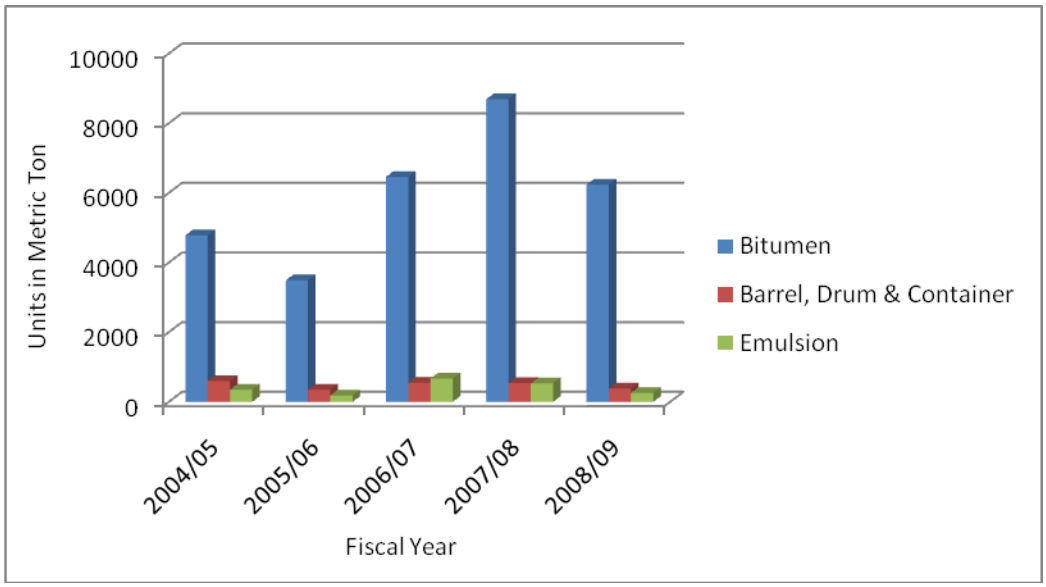
(Source: Corporate Office of NBBUL)

The above Table 4.5 showed that the planned production in the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 were 5735, 4025, 7680, 9760 and 6885 metric ton respectively. NBBUL was quite optimistic in the fiscal year 2007/08 for projecting the highest production since it projected 9760 metric ton for that year. Since the budgeted production followed the same trend of actual sales, it can be assumed that the company planned its production by

taking into consideration about the actual sales of last year and other external circumstances.

Figure 4.5

Budgeted Production of Overall Products of NBBUL



To know how well the organization has implemented the planned production into reality; an attempt has been made by comparing actual production with planned production and evaluating deviation if any in the table 4.6.

Table 4.6

Annual Performance Analysis of Production

(Units in Metric Ton)

Fiscal Year	Production		Achieved	Difference in		
	Budgeted	Actual	%	Units	%	Remarks
2004/05	5735	4821	84.06	914	15.94	Unfavourable
2005/06	4025	2701	67.11	1324	32.89	Unfavourable
2006/07	7680	6857	89.28	823	10.72	Unfavourable
2007/08	9760	8107	83.06	1653	16.94	Unfavourable
2008/09	6885	6064	88.08	821	11.92	Unfavourable

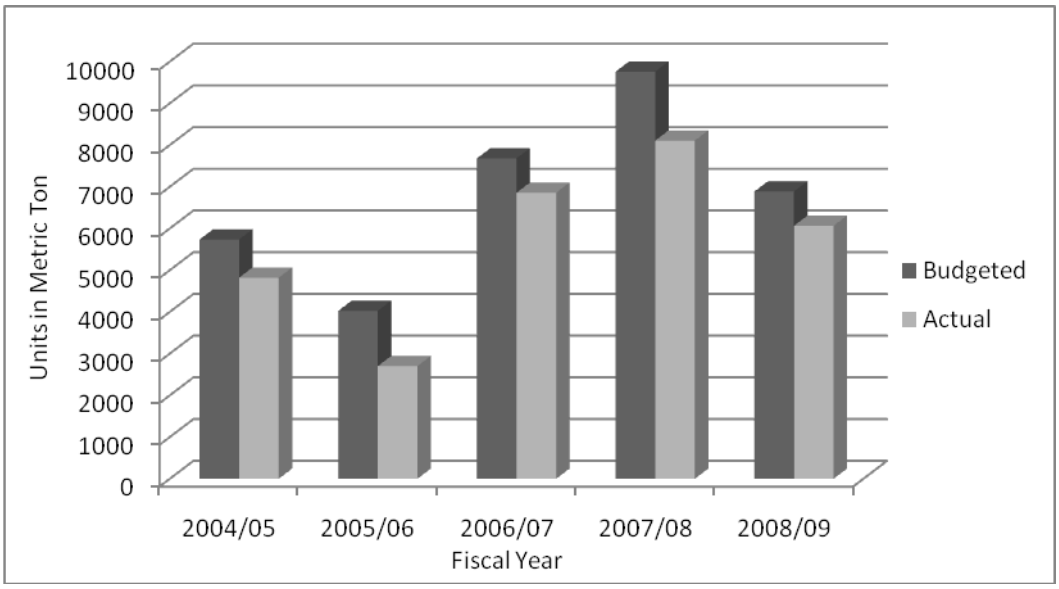
(Source: Corporate Office of NBBUL)

The above Table 4.6 showed the planned and actual production of NBBUL. Production target was achieved by 84.06%, 67.11%, 89.28%, 83.06% and

88.08% in the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The fluctuation behind such was due to less research of external environment. The inadequacy of intellectuals at decision making level had also raised such problem. However, on average 82.32% of target production was fulfilled during the research period. The company enjoyed highest achievement of 89.28% in the fiscal year 2006/07 and suffered from poor performance in the fiscal year 2005/06 where production variance was 32.89%. Though the average achievement of 82.32% was quite satisfactory, the company should take precautions for not repeating the performance as of the fiscal year 2005/06 while preparing production budget.

Figure 4.6

Annual Performance Analysis of Production of NBBUL



The details of statistical tools i.e. mean, standard deviation and correlation coefficient of budgeted and actual production presented in Appendix – I are summarized below:

Table 4.7

Budgeted and Actual Production Comparison

Statistical Tools	Budgeted Production (Metric Ton)	Actual Production (Metric Ton)
Mean	6817	5710
Standard Deviation (б)	1917.11	1845.59
Coefficient of Variance (C.V.)	28.12%	32.32%

(Source: Appendix-I)

C.V. is considered as the best tool to measure variance. The calculated coefficient of variance (i.e. 32.32%) of actual production was higher than that of budgeted production (i.e. 28.12%), it is higher than 4.2% so, actual production is highly variable then budgeted production. Likewise the mean budgeted production and mean actual production of NBBUL during the research period were 6817 metric ton and 5710 metric ton respectively.

4.4.1 Correlation between Budgeted and Actual Production

Let us assume that the budgeted production and actual production be X and Y respectively in order to find the degree of relationship between them. Then the Karl Pearson's Correlation Coefficient (r) between budgeted and actual production is calculated as follows:

As we know,

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} = + 0.9853 \textit{ (from Appendix – I)}$$

Since, the value of r = +0.9853 is nearly equal to +1, it is worthwhile to say that there is high degree of positive correlation between budgeted and actual sales. Hence, actual production was directly proportional to budgeted production. To test the significance of the value of 'r', we have to find the value of P.E. as follows;

Probable Error (P.E.) $= 0.6745 \times \frac{1-r^2}{\sqrt{N}}$

$= 0.6745 \times \frac{1-(0.9853)^2}{\sqrt{5}}$

$= 0.0088$

Here, 6 x P.E. $= 6 \times 0.0088 = 0.0528$

Since, r > 6 P.E. (i.e. r = +0.9853 and 6 x P.E. = 0.0528) then the value of 'r' is significant i.e. is high degree of positive correlation between budgeted and actual production which indicated that budgeted and actual production went into the same direction.

4.4.2 Regression Analysis between Budgeted and Actual Production

For this purpose, let actual production (the dependent variable) and budgeted production (the independent variable) are Y and X respectively. Then the regression line of actual production(Y) on budgeted production(X) is as below:

$$(Y-\bar{Y}) = \frac{r_{xy}(X-\bar{X})\sigma_y}{\sigma_x}$$

where, $\bar{X} = 6817$

$\bar{Y} = 5710$

$\sigma_x = 1917.11$

$\sigma_y = 1845.59$

$r_{xy} = 0.9853$ *(from Appendix - II)*

Then, $Y - 5710 = \frac{0.9853\,(X-6817) \times 1845.59}{1917.11}$

or, $Y - 5710 = 0.9485\,(X-6817)$

or, $Y - 5710 = 0.9485\,X - 6465.92$

or, $Y = -755.92 + 0.9485\,X$

From this regression equation it is clear that there was positive relation between budgeted and actual sales. From this regression it is clear that the actual sales increased by 0.9485 metric ton per one metric ton change in budgeted sales.

4.4.3 Fitting Straight Line Trend of Actual Production

Using least square method, the straight line of actual production (Y) is expressed as follows:

$Y_c = a + bX$ …….. (i)

where, Y_c = Actual production

a = Fixed value

b = Variable value

Now, the straight line is fitted using least square method, assuming 2006/07 as base year.

Table 4.8

Fitting Straight Line trend of Actual Production

FY	Mid Value (X)	Actual Production (Y)	X^2	XY
2004/05	-2	4821	4	-9642
2005/06	-1	2701	1	-2701
2006/07	0	6857	0	0
2007/08	1	8107	1	8107
2008/09	2	6064	4	12128
	$\sum X = 0$	**$\sum Y = 28550$**	**$\sum X^2 = 10$**	**$\sum XY = 7892$**

(Source: Sales Department of NBBUL)

Here, $a = \frac{\sum Y}{N} = \frac{28550}{5} =$ = 5710

$b = \frac{\sum XY}{\sum X^2} = \frac{7892}{10} = 789.20$

Putting the value of a and b in equation 'i',

$Y_c = 5710 + 789.20\ X$

The above calculation showed that 789.20 metric ton will increase in actual production in every year if the trend of past years continues in future also. With

the help of the above equation the value of actual production for the fiscal year 2009/10 can be calculated as follows, where value of 'X' is 3.

Estimated Actual production for the fiscal year 2009/10 is,

$$Y_{2009/10} = 5710 + 789.20 \times 3$$

$$= 8077.60 \text{ metric ton.}$$

4.5 Sales Plan in NBBUL

NBBUL is a manufacturing company undertaken by Panchakanya Group, which produces and sells bitumen, drums, containers, barrels and emulsion. The object of this topic is to present the variance between the budgeted sales and the actual sales occurred during a certain fiscal year in order to provide the basis to take corrective action to meet the planned sales. The following schedule presents actual sales of NBBUL from FY 2004/05 to 2008/09.

Table 4.9

Actual Sales

(Units in Metric Ton)

Fiscal Year / Particulars	2004/05	2005/06		2006/07		2007/08		2008/09	
	Ton	Ton	Change %	Ton	Change %	Ton	Change %	Ton	Change %
Bitumen	4036	2813	-30.30	5919	110.42	7526	27.15	5394	-28.33
Barrel, Drum & Container	482	482	0.00	440	-8.71	317	-27.95	407	28.39
Emulsion	263	263	0.00	568	115.97	340	-40.14	276	-18.82
Total	**4781**	**3558**		**6927**		**8183**		**6077**	

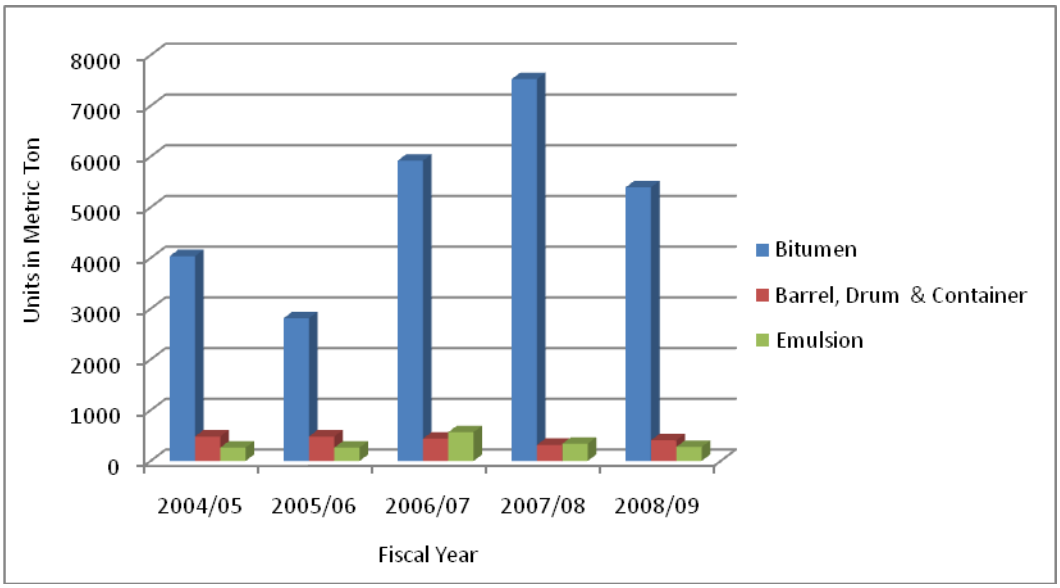
(Source: Sales Department of NBBUL)

Above table showed that the total actual sales of all product of NBBUL is in fluctuating trend. Between the fiscal year 2004/05 to 2008/09, the change percentage on Bitumen had ranged from -30.30% to 110.42%, Barrel, Drum & Container had ranged from -8.71% to 28.39% whereas Emulsion had ranged from -40.14% to 115.97%. Since the company has sole customer i.e. Road Construction Department of Nepal, it sales remained highly reliable upon the decision and policies of it which is the main cause of variability between the

change percentage of the products. In the fiscal year 2004/05 company sold 4781 metric tones which decreased to 3558 metric tones in the fiscal year 2005/06. The fiscal year 2007/08 remained good for NBBUL, it got the highest success (i.e. 8183 metric tons) among these five years period.

Figure 4.7

Actual Sales of NBBUL



Similarly, the budgeted sale of NBBUL is presented on following table

Table 4.10

Budgeted Sales of Overall Products

(Units in Metric Ton)

Fiscal Year / Particulars	2004/05	2005/06	2006/07	2007/08	2008/09
Bitumen	4920	3800	6200	8095	5700
Barrel, Drum & Container	670	380	510	515	440
Emulsion	365	250	650	580	370
Total	**5955**	**4430**	**7360**	**9190**	**6510**

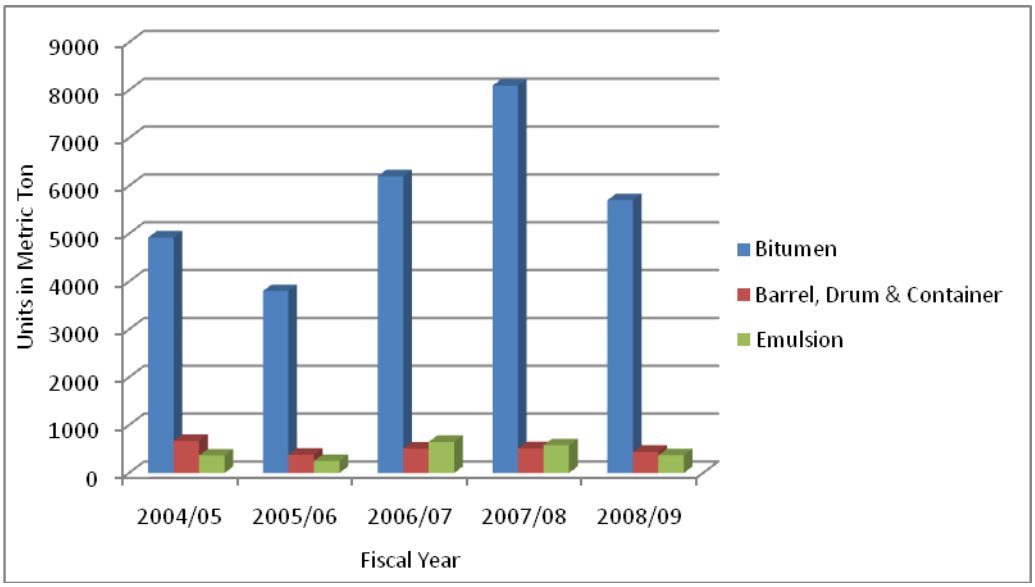
(Source: Sales Department of NBBUL)

Above table showed that the budgeted sales are also in fluctuating trend. Since NBBUL has sole customer, it planned sales according to the budget earmarked by the government for road construction purposes in Nepal. Thus, the planned

sales of NBBUL completely depend on the volume of budget released for such purpose. The planned sales volume of bitumen was highest, 8095 tons, in the fiscal year 2007/08 and lowest, 3800 tons, in the fiscal year 2005/06. Similarly, the planned sales volume of barrel, drum and container ranged from 380 metric tons in the fiscal year 2005/06 to 670 tons in the fiscal year 2004/05. Likewise, the budgeted emulsion ranged from 250 metric tons in the fiscal year 2005/06 to 650 metric tons in the fiscal year 2006/07.

Figure 4.8

Budgeted Sales of Overall Products of NBBUL



An attempt has been made by comparing planned sales with actual sales to know the effectiveness of organization in adopting the planned sales. Greater the variance infers ineffectiveness of the NBBUL in meeting the target set out and making the budget. The comparison between actual sales and budgeted sales is presented below:

Table 4.11

Annual Performance Analysis of Sales

(Units in Metric Ton)

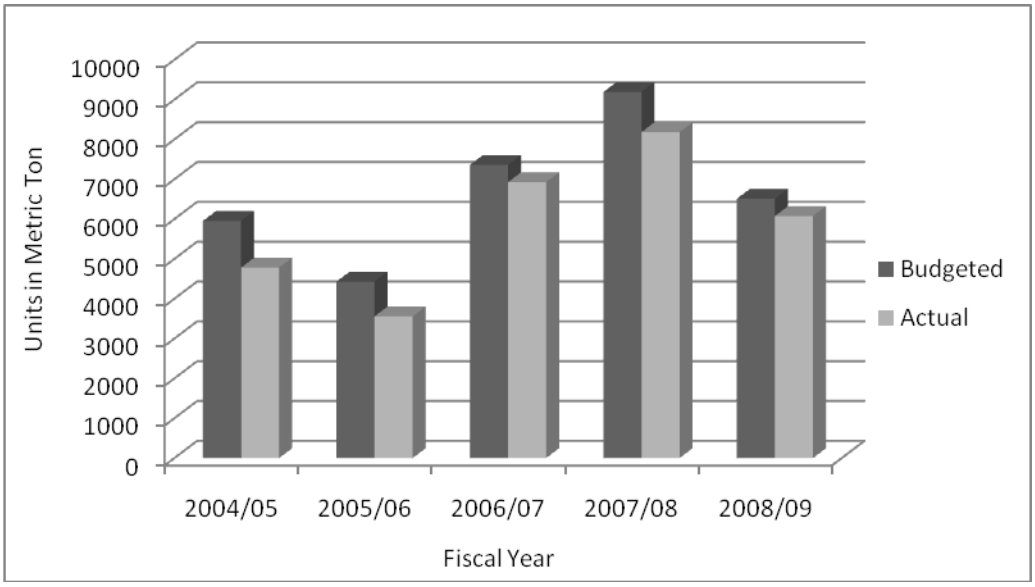
Fiscal Year	Sales		Achieved	Difference in		
	Budgeted	Actual	%	Units	%	Remarks
2004/05	5955	4781	80.29	1174	19.71	Unfavourable
2005/06	4430	3558	80.32	872	19.68	Unfavourable
2006/07	7360	6927	94.12	433	5.88	Unfavourable
2007/08	9190	8183	89.04	1007	10.96	Unfavourable
2008/09	6510	6077	93.35	433	6.65	Unfavourable

(Source: Sales Department of NBBUL)

After comparing the budgeted and actual sales it is found that NBBUL couldn't achieve the budgeted sales in this five year which is shown in above table. In the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 NBBUL achieved 80.29%, 80.32%, 94.12%, 89.04% and 93.35% of planned sales which were quite satisfactory. The fiscal year 2006/07 and 2008/09 remained good for NBBUL because achieving 94.12% (2006/07) and 93.35% (2008/09) is not a joke. NBBUL should focus both government budget for road construction and past sales trend while preparing sales plan in order to fulfill these differences.

Figure 4.9

Annual Performance Analysis of Sales



To find out the nature of variability of budgeted and actual sales in different years, it is necessary to calculate the arithmetic mean, standard deviation and coefficient of variance of budgeted and actual sales for the research year. The detail calculation of these statistical tools is presented in Appendix – II and the results are as follows.

Table 4.12

Budgeted and Actual Sales Comparison

Statistical Tools	**Budgeted Sales (Metric Ton)**	**Actual Sales (Metric Ton)**
Mean	6689	5905.2
Standard Deviation (б)	1573.48	1614.63
Coefficient of Variance (C.V.)	23.52%	27.34%

(Source: Appendix – I)

The greater coefficient of variance and standard deviation of actual sales than budgeted sales indicated that actual sales were more risky than budgeted sales. In the above table, the calculated mean of budgeted sales and actual sales are 6689 and 5905.2 metric ton respectively. The coefficient of variance of budgeted sales and actual sales are 23.52% and 27.34% respectively. The standard deviation of budgeted sales and actual sales are 1573.48 and 1614.63 metric ton respectively. Hence, the management should endeavor to trace the causes behind the variability otherwise it may jeopardize.

4.5.1 Correlation between budgeted and actual sales

"Correlation analysis is defined as the statistical technique which measures the degree of relationship between variables" *(Sharma and Silwal; 2061: 246)* Karl Pearson's Correlation Coefficient (r) is applied here to measure the degree of relationship between the budgeted sales (say X) and actual sales (say Y).

where, $r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} = + 0.9824$ *(from Appendix – I)*

Since, the value of r = + 0.9824 which is nearer to +1, there is high degree of positive correlation between budgeted and actual sales. It means that actual sales increased with the increase in budgeted sales and vice versa which showed a good effort of management. In scientific term, actual sales are directly proportional to budgeted sales.

Now, the Probable Error is used to measure the reliability and the test of significance of correlation coefficient which is calculated by using following formula.

Probable Error (P.E.) $= 0.6745 \times \frac{1-r^2}{\sqrt{N}}$

Where, N = No. of pairs of observations

r = the value of correlation coefficient

P.E. is used in interpretation whether the calculated value of 'r' is significant or not. If,

a. If r < P.E., it is insignificant, i.e. there is evidence of correlation.
b. If r > 6 P.E., it is significant.
c. If P.E.< r > 6 P.E. nothing can be concluded.

Hence, the significance of the value of 'r' is examined by using P.E. is,

P.E. $= 0.6745 \times \frac{1-r^2}{\sqrt{N}}$

$= 0.6745 \times \frac{1-(0.9824)^2}{\sqrt{5}}$

$= 0.0105$

Here, 6 x P.E. = 6 x 0.0105 = 0.063

Since, r > 6 P.E. (i.e. r = +0.9824 and 6 x P.E. = 0.063) then the value of 'r' is significant i.e. there is high degree of positive correlation between budgeted and actual sales.

4.5.1.1 Applying t-test

Set up Hypothesis

Null Hypothesis

H_O= 0

That is the variable (actual sales and budgeted sales) in the population are uncorrelated.

Alternative hypothesis $H_1 \neq 0$

That is the variables in the population are correlated.

Table 4.13

t-test

r	r^2	P.E	6P.E	t_{cal}	t_{tab} (@5%) (4d.f)
0.9824	**0.9651**	**0.0105**	**0.0632**	**9.1057**	**2.78**

Source: Appendix-VII

In table 4.13 calculated value of t-test is 9.1057 which is more then tabulated value of t-test at 5% level of significance and 4 degree of freedom 2.78, so we can conclude that correlation(r) between budgeted sales and actual sales is significant and H_o is rejected which means that the variable are correlated in the population.

4.5.2 Regression Analysis between Budgeted and Actual sales

Regression Analysis between budgeted and actual sales for this purpose, actual sales (the dependent variable) and budgeted sales (the independent variable) are assumed to be Y and X respectively. Then the regression line of actual sales(Y) on budgeted sales(X) is as below:

$$(Y-\bar{Y})=\frac{r_{xy}(X-\bar{X})\sigma_y}{\sigma_x}$$

Where, $\bar{X}$ = 6689

$\bar{Y}$ = 5902.20

$б_x$ = 1573.48

$б_y$ = 1614.63

r_{xy} = 0.9824 *(from Appendix – II)*

Then,

$$Y - 5902.20 = \frac{0.9824\ (X-6689) \times 1614.63}{1573.48}$$

or, $Y - 5902.20 = 1.008\ (X-6689)$

or, $Y - 5902.20 = 1.008\ X - 6742.51$

or, $Y = -840.31 + 1.008\ X$

From this regression equation it is clear that the actual sales increased by 1.008 metric ton per one metric ton change in budgeted sales.

4.5.3 Fitting Straight Line Trend of Actual Sales

Likewise, a straight line trend can also be fitted by using Least Square Method (Time Series Analysis) to show the relationship between year and actual sales of the relevant year. It shows the trend of actual sales and is an important tool to forecast sales for future. The straight line of actual sales (Y) is expressed as follows:

$Y_c = a + bX$ …….. (i)

Where, Y_c = Actual sales

a = Fixed value

b = Variable value

Now, the straight line is fitted by using least square method, assuming 2006/07 as base year.

Where,

a = 5905.20

b = 721.7 *(Appendix VIII)*

Putting the value of a and b in equation 'i',

Y_c = 5905.20 + 721.7 X

The above calculation showed that 721.7 metric ton will increase in actual sales in every year if the trend of past years continues in future also. With the help of the above equation the value of actual sales for the fiscal year 2009/10 can be calculated as follows, where value of 'X' is 3.

Estimated Actual sales for the fiscal year 2009/10 is,

$Y_{2009/10}$ = 5905.20 + 721.7 x 3

= 8070.30 metric ton.

Estimated Actual sales for the fiscal year 2010/11 is,

$Y_{2010/11}$ = 5905.20 + 721.7 x 4

= 8792 metric ton.

Estimated Actual sales for the fiscal year 2011/12 is,

$Y_{2011/12}$ = 5905.20 + 721.7 x 5

= 9513.7 metric ton.

Estimated Actual sales for the fiscal year 2012/13 is,

$Y_{2012/13}$ = 5905.20 + 721.7 x 6

= 10235.4 metric ton.

Estimated Actual sales for the fiscal year 2013/14 is,

$$Y_{2013/14} = 5905.20 + 721.7 \times 7$$

$$= 10957.1 \text{ metric ton.}$$

4.5.4 Correlation between Actual Sales and Actual Production

Let X be the actual sales and Y be the budgeted sales, then the Karl Pearson's correlation coefficient 'r' can be calculated as follows:

$$\text{Here, } r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} = + 0.9903 \textit{ (from Appendix – III)}$$

Since, the value of r = +0.9903 is nearly equal to +1, we cannot deny from the truth that there is high degree of positive correlation between actual sales and actual production. Hence, actual sales increased with the increase in actual production and vice versa. To test the significance of the value of 'r', the value of P.E. is;

$$\text{Probable Error (P.E.)} = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$

$$= 0.6745 \frac{1-(0.9903)^2}{\sqrt{5}}$$

$$= 0.0058$$

$$\text{Here, 6 x P.E.} = 6 \times 0.0058 = 0.0348$$

Since, r > 6 P.E. then the value of 'r' is significant that means NBBUL remained success in creating a low degree of positive correlation between actual sales and actual production within this research period.

4.6 Financial Analysis of NBBUL

"Financial analysis is the process of identifying the financial strengths and weakness of the firm by properly establishing relationships between the items of the balance sheet and the profit and loss account" *(Pandey; 1979: 109). Financial* efficiency and soundness is a vital element to achieve the predetermined goals of business enterprise. Therefore, every enterprise needs

to analyze its financial ratios to acquire knowledge of the financial position of the company. So, to know the exact financial position of NBBUL, some major financial ratios have been analyzed here.

Table 4.14

Summary of Financial Statement

(Units in Rs.)

Fiscal Year / Particulars	2004/05	2005/06	2006/07	2007/08	2008/09
Current Assets	95641811	83090730	88370133	119865641	132542111
Fixed Assets	12812663	12136775	11543096	11139260	9807692
Total Assets	108454474	95227505	99913229	131004901	142349803
Current Liabilities	87169566	80894355	82667493	106993739	118565048
Net Profit	937458	-6951758	2912586	6765425	2512433
Sales	100607031	72492383	164678755	223358972	201311621
Capital Employed	21284908	14333150	17245736	24011161	23784755
Quick Assets	66978717	61020858	69513429	106406237	118007115
Shareholder Equity	21284908	14333150	17245736	24011161	23784755

(Source: Annual Report of NBBUL)

The above table 4.14 represented the financial status of NBBUL. These financial indicators are used below to calculate different financial ratios.

4.6.1 Current Ratio

Current ratio is a measure of the firm's short term solvency. It indicates the availability of current assets in rupees for every one rupee of current liability. As a conventional rule, a current ratio of 2-to-1 or more is considered satisfactory. The current ratio is calculated by dividing the current assets by current liabilities.

Table 4.15

Current Ratio

(Units in Rs.)

Fiscal Year	Current Assets (CA)	Current Liabilities (CL)	Current Ratio (CR) = CA/CL
2004/05	95641811	87169566	1.10:1
2005/06	83090730	80894355	1.03:1
2006/07	88370133	82667493	1.07:1
2007/08	119865641	106993739	1.12:1
2008/09	132542111	118565048	1.12:1

(Source: Annual Report of NBBUL)

The table 4.15 showed the fluctuating trend of current ratio. None of the current ratios of NBBUL had met the standard ratio of 2:1. It can be concluded that NBBUL was not in the position to meet its current obligations and was finding great difficulties while paying bills.

4.6.2 Quick Ratio

This ratio establishes a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of value. Inventories are considered to be less liquid. So, quick asset doesn't include it. The quick ratio is found out by dividing quick assets by current liabilities. The quick ratio of NBBUL is as follows:

Table 4.16

Quick Ratio

(Units in Rs.)

Fiscal Year	Quick Assets (QA)	Current Liabilities (CL)	Quick Ratio (QR) = QA/CL
2004/05	66978717	87169566	0.77:1
2005/06	61020858	80894355	0.75:1
2006/07	69513429	82667493	0.84:1
2007/08	106406237	106993739	0.99:1
2008/09	118007115	118565048	0.99:1

(Source: Annual Report of NBBUL)

Generally a quick ratio of 1:1 is considered to be a satisfactory. But in the case of NBBUL, none of the quick ratios had met the standard ratio of 1:1 which means NBBUL was facing the problem of meeting its obligations.

4.6.3 Total Asset Turnover Ratio

This ratio shows the firm's ability in generating sales from all financial resources committed to total assets. It indicates the sales generated per rupee of

the investment in total assets. It is calculated by dividing sales by total asset of the firm.

Table 4.17
Total Asset Turnover Ratio

Fiscal Year	Sales (Rs.)	Total Assets (Rs.)	Ratio = Sales/Total Assets
2004/05	100607031	108454474	0.93
2005/06	72492383	95227505	0.76
2006/07	164678755	99913229	1.65
2007/08	223358972	131004901	1.70
2008/09	201311621	142349803	1.41

(Source: Annual Report of NBBUL)

Total asset turnover ratio of NBBUL in the fiscal year 2005/06 (i.e. 0.76) and in the fiscal year 2008/09 (i.e. 1.41) were lower than previous year. The company enjoyed high asset turnover ratio in the fiscal year 2007/08 (i.e. 1.70) which means NBBUL had been able to produce Rs.1.70 sales per rupee of investment in total asset. The company had made better utilization of its assets in this year.

4.6.4 Capital Employed Turnover

Capital Employed may be defined as shareholder's equity plus long term debt. Higher ratio of capital employed turnover indicates better utilization of owners and long-term creditor's funds. It is calculated by dividing sales by capital employed. The capital employed turnover of NBBUL is mentioned in table 4.18 as follows:

Table 4.18
Capital Employed Turnover

(Units in Rs.)

Fiscal Year	Sales (Rs.)	Capital Employed (CE) (Rs.)	Ratio = Sales/CE
2004/05	100607031	21284908	4.73
2005/06	72492383	14333150	5.06
2006/07	164678755	17245736	9.55

2007/08	223358972	24011161	9.30
2008/09	201311621	23784755	8.46

(Source: Annual Report of NBBUL)

The above Table 4.18 showed that NBBUL achieved highest capital employed turnover in the fiscal year 2006/07(i.e. 9.55) and lowest in the fiscal year 2004/05 (i.e. 4.73) which means NBBUL was able to produce Rs.9.55 sales and Rs.4.73 sales per rupee of capital employed in the fiscal year 2006/07 and 2004/05 respectively. Since higher ratio indicates that firm is very efficient on sales activity, the firm remained more efficient in the fiscal year 2006/07.

4.6.5 Net Profit Margin

Net Profit Margin represents the relationship between net profit after tax (NPAT) and sales of business enterprises. This ratio is the overall measure of the firm's ability to turn each rupee of sales into profit. It is obtained by dividing NPAT by sales.

Table 4.19

Net Profit Margin

(Units in Rs.)

Fiscal Year	Net Profit (Loss) NPAT (Rs.)	Sales (Rs.)	Ratio = NPAT/Sales (%)
2004/05	937458	100607031	0.93
2005/06	-6951758	72492383	-9.59
2006/07	2912586	164678755	1.77
2007/08	6765425	223358972	3.03
2008/09	2512433	201311621	1.25

(Source: Annual Report of NBBUL)

The above table 4.19 showed that the company suffered from a huge loss in the fiscal year 2005/06 which was 9.59 % of sales revenue and indicated fall in net profit due to increase in cost of production and operation. The net profit ratio was high in the fiscal year 2007/08 (i.e. 3.03%) and positive in other fiscal years except in the fiscal year 2005/06. The lower ratio indicated that there may

be either poor sales policy or use of high amount of operation expenses as well as high interest cost.

4.6.6 Return on Shareholder's Equity

This ratio measures how well the firm has used the resources of the owner's. It is obtained by dividing net profit after tax (NPAT) by shareholder's equity (SE).

Table 4.20

Return on Shareholder's Equity (ROSE)

(Units in Rs.)

Fiscal Year	Net Profit (Loss) (Rs.)	Shareholder's Equity (Rs.)	Ratio = NPAT/SE (%)
2004/05	937458	21284908	4.40
2005/06	-6951758	14333150	-48.50
2006/07	2912586	17245736	16.89
2007/08	6765425	24011161	28.18
2008/09	2512433	23784755	10.56

(Source: Annual Report of NBBUL)

The Table 4.20 showed the return on shareholder's equity (ROSE) of NBBUL during the fiscal year 2004/05 to 2008/09. In the fiscal year 2005/06, the owner of NBBUL faced a huge loss of 48.50% of their investment. The company showed poor ROSE in the fiscal year 2004/05 (i.e. 4.40%). However, the ROSE in fiscal year 2007/08 was in satisfactory condition where the owner earned 28.18% of their investment. Since the return on shareholder's equity reflects the overall performance and effectiveness of the company, the ROSE being lower than the industry norm is the result of overall policy errors of the management.

4.7 Cash Flow Statement of NBBUL

Cash Flow statement describes the sources and uses of cash of an organization. It provides information about the inflow and outflow of cash of firm in an

accounting period. It can be defined as a statement which explains the change in cash position from one balance sheet date to the next balance sheet date. The cash flow statement of NBBUL is presented in Appendix - IV.

The Appendix – IV showed that the cash flows from operating activities of NBBUL were Rs.19,41,628, Rs.155,22,158, Rs.67,98,568, Rs.(74,75,007) and Rs.115,99,514 in the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. There was negative cash flow of Rs.74,75,007 from operating activities in the fiscal year 2008/09. Similarly, NBBUL paid interest of Rs.58,10,221, Rs.48,06,872, Rs.51,44,640, Rs.53,20,372 and Rs.58,21,897 in the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The higher amount of interest indicated that NBBUL should redeem its loan as far as possible in order to maximize profit.

4.8 Profit and Loss of NBBUL

Profit is the lifeblood of any organization. All the activities are performed with a motive to earn profit. It is the base for survival and reason for the establishment of any firm. The profit (loss) of NBBUL is summarized below on the basis of Income Statement of NBBUL presented in Appendix - V.

Table 4.21

Annual Performance Analysis of Profit (Loss) of NBBUL

(Units in Rs.)

Fiscal Year	Profit (Loss)		Achieved	Difference in		
	Budgeted	Actual	%	Rs.	%	Remarks
2004/05	1753425	937458	53.46	815967	46.54	UF
2005/06	1752300	-6951758	-----	8704058	496.72	UF
2006/07	3702562	2912586	78.66	789976	21.34	UF
2007/08	7569037	6765425	89.38	803612	10.62	UF
2008/09	2607473	2512433	96.36	95040	3.64	UF

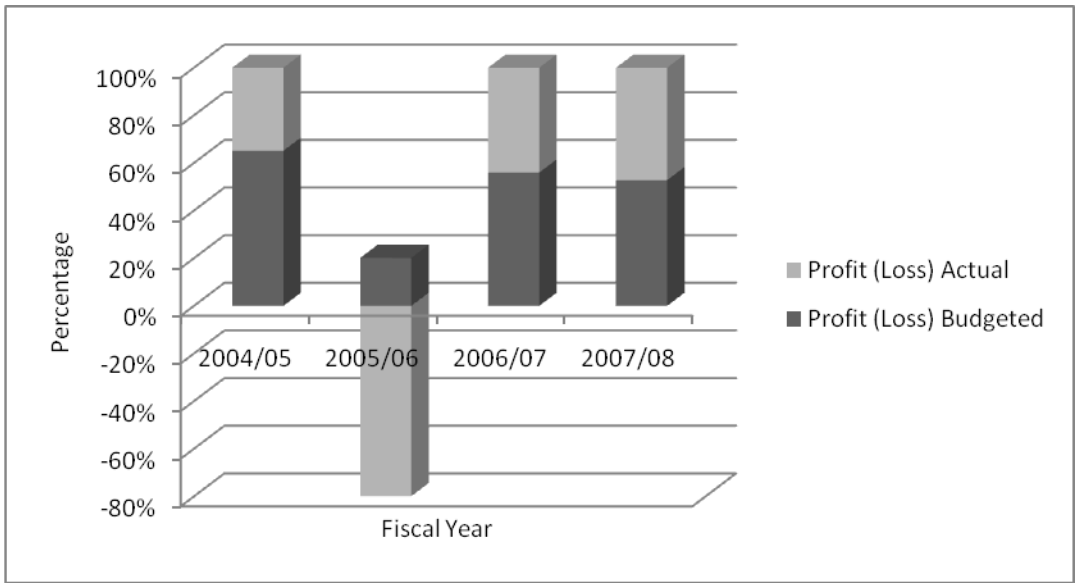
(Source: Annual Report of NBBUL)

The Table 4.21 showed that NBBUL met planned profit in none of the research year. It achieved only 53.46%, 78.66%, 89.38% and 96.36% in the fiscal year

2004/05, 2006/07, 2007/08 and 2008/09 respectively. In the fiscal year 2004/05, it suffered from a heavy loss of Rs. 69, 51,758 which showed the failure of management in profit planning. There was a variance of Rs. 87, 04,058 between planned profit and achieved profit in this year. However, the profit planning in recent two years i.e. fiscal year 2007/08 and 2008/09 was quite satisfactory, the organization achieved 89.38% and 96.36% of profit planning in these years respectively. Although, the organization is running at profit right now, management should be very careful while planning profit.

Figure 4.10

Annual Performance Analysis of Net Profit



4.8.1 Forecasting of Profit (Loss) of NBBUL

Least Square Method has used here to analyze and examine the trend of net profit to forecast for a given time. This method shows the relationship between time and actual profit of the relevant year. To fit straight line trend, the time factor is considered as independent factor (X) and net profit is considered dependent factor (Y) upon time.

Table 4.22

Fitting Straight Line Trend of Net Profit

Using Least Square Method from the Fiscal Year 2004/05 to 2008/09

Fiscal Year	X	Net Profit (Y)	X^2	XY
2004/05	-2	937,458	4	-187,4916
2005/06	-1	-6,951,758	1	6,951,758
2006/07	0	2,912,586	0	0
2007/08	1	6,765,425	1	6,765,425
2008/09	2	2,512,433	4	5,024,866
Total	**$\sum X = 0$**	**$\sum Y = 6,176,144$**	**$\sum X^2 = 10$**	**$\sum XY = 16,867,133$**

Assuming the base year as 2006/07

Here

Y (net profit) = a + bX(time) ……(i)

Where, a $= \frac{\sum Y}{N} = \frac{6,176,144}{5} = 1,235,228.80$

b $= \frac{\sum XY}{X^2} = \frac{16,867,133}{10} = 1,686,713.30$

Putting the value of a and b in above equation (i), we get;

Y = 1,235,228.80 + 1,686,713.30 X

Since, the trend line is in positive it denoted that the profit will increase by Rs.1, 686,713.30 each year if the profit trend of past year continues.

By using the trend line equation we can forecast profit for the year 2009/10. The value of X for the proposed year is 3 and base year is 2006/07.

Then, Profit for year 2009/10:

Y = 1,235,228.80 + 1,686,713.30 x 3

= Rs. 6,295,368.70

Hence, by using the least square method the profit for the year 2009/10 is determined as Rs. 6,295,368.70. Even though NBBUL faced a huge loss in fiscal year 2005/06, it was success to recover the loss.

4.9 Major Findings

After the above analysis following major findings are achieved:

- Budgeting system of NBBUL is not based on accounting standards. It does not have practice of compressive profit planning and control.
- Material purchase of NBBUL is in increasing trend but no reconcile with production quantity.
- Overhead expenses incurred by 5.27 % in the fiscal year 2006/07 and 16.70 in fiscal year 2008/09 more than budgeted overhead expenses. Thus NBBUL have no control over overhead expenses.
- NBBUL has no practice of setting standards of direct labor hour per unit of each product. As a result, NBBUL paid 52.14% more than budgeted labor cost.
- There is high degree of positive correlation coefficient between budgeted and actual sales of NBBUL i.e. +0.9824 and budgeted and actual production i.e. +0.9853 and actual sales and actual production i.e. 0.9903.
- Correlation(r) between budgeted sales and actual sales is significant.
- NBBUL forecasts sales and production giving preference to government budget separated for road construction purpose.
- Using least square method, the estimated sales and production in the fiscal year 2009/10 of NBBUL will be 8070.30 metric ton and 8077.60 metric ton respectively.
- Both actual sales and production fluctuated as compared to sales plan and production plan respectively.

- NBBUL has faced the problem of meeting obligations. The current ratios and quick ratios of five years were less than standard ratio of 2:1 and 1:1 respectively.
- The company turned highest sales of Rs.1.70 per rupee investment in total assets in the fiscal year 2007/08 and Rs. 9.55 sales per rupee of capital employed in the fiscal year 2006/07.
- There is no separate department for planning purposes. The top level executives set up the specific goals and strategy.
- Though the company earned profit in recent years, a loss of Rs. 69, 51,758 indicated the managerial inefficiency in profit planning.
- By using the least square method the profit for the year 2009/10 is determined as Rs. 6,295,368.70

CHAPTER - V

SUMMERY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Nepal is a developing country. Nepal is dependent upon the agriculture sector. Nepal has mixed economy where private sector and public sector have been working side by side. In Nepal, most of the organizations were established with objectives of creating employment opportunities, mobilization of natural sources and earning reasonable profit necessary for the development of the country. But they have no clear-cut vision. Many more company is suffering from serious problem of under utilization of their capacity.

In the context of Nepal industrialization is in its infancy industrial sectors have contributed in the economy not more than 10% and more than 78% people still depending on agriculture for the livelihood.

Geographically, the country is divided in three regions, mountain, and hill and Terai accommodation 7.3, 44.3, and 48.4 % of population respectively. Based on area of districts, these regions constitute 35%, 43% and 23% of the total land area. There are five development regions and 75 administrative districts. Districts are further divided into smaller units, called village development committee (VDC) and municipality. Currently there are 3915 VDC's and 58 Municipalities in the country, each VDC's composed of 9 wards, municipality ward range from 9 to 35. Kathmandu is the capital city of Nepal.

Profit planning and control means the development of objectives, which motivates the organization to achieve the objectives effectively and efficiently. It is one of the most important mechanisms for planning and controlling business operations. The effective operation of a business concern resulting into the excess of income over the expenditure fully depends upon as to what

extent the management follows proper planning, effective co-ordination and dynamic control.

Nepal a landlocked country, construction of road plays a crucial role for the development of country. Taking this in view, Nepal Oil Corporation Limited established a public limited company named as Nepal Bitumen and Barrel Udhyog Ltd. (NBBUL) in 1984. The head office of NBBUL is located at Pulchowk, Lalitpur and factory at Amlekhgunj, Bara District. The company has a share capital of NRs. 210,68,000 and provides employment for 50 person (25 technical staff and 25 Administrative staff).

NBBUL has now taken over by Panchakanya Group in 1994 August, (Bhadra, 2051), a leading industrial and trading house of Nepal, under privatization program of the then His Majesty's Government. Panchakanya Group has 65% share, NBBUL's staff has 5% and rest 30% belongs to the general public. Among six board of members, four are from Panchakanya Group and rest two members are one from NBBUL staff and another from the general public.

5.2 Conclusions

After analyzing in detail the present practice of sales planning in NBBUL, the following concludes can be drawn.

a) There is not complete and comprehensive budgeting system. NBBUL doesn't prepare long-term strategic budget, but prepare short-term profit plan only in terms of budget for each year.
b) There is no perfect planning for purchasing materials and sales of goods.
c) Lack of skilled planner & budgeting experts. Budgets are prepared on traditional basis.
d) It is no research & development work for improving factory productivity, capacity utilization and cost control.
e) The plan are prepared from top level, low involvement of lower level and later communicated to subordinate level.

f) Basically, Co. prepares sales budget based on previous sales trend. No analyzed about external and internal environment.
g) Company has not analyzed strength, weakness opportunity and threats (SWOT). The following SWOT of the company.

1) Opportunity / Strength

a) NLL produces bitumin and barrel, which have covered nearly 98% of Nepalese market.
b) Co. uses electricity for plant operation. Monthly Co pays average 10 lakh for electricity consume.
c) Creation of employment opportunity, around 360 people are employed and more than 25 thousand people are engage in this business indirectly.
d) Uses chemical to produce bitumin from abroad market.
e) Sole business in bitumin in the country.
f) Uses matel cap and packaging cartoon from domestic production.
g) Company pays large amount to Govt. for Tax.
h) Despite of different difficulties situation, company has achieve a satisfactory sales target meet.

2) Weakness / Threats

a) High production and selling cost.
b) The large amount goes for Govt. revenue as Tax, same for interest against financial loan.
c) Strike is major problem for proper distribution.
d) Lack of autonomy.
e) Lack of Participatory management & Poor in staff management.
f) NBBUL has no systematic forecasting for sales Budget.
g) The main reason for low capacity utilization is due to unavailability of right material of right quantity at right place & at right time & machine is old.

h) NBBUL has not formulated competitive sales strategies. Adequate authority to decide and create new ideas to formulate various plans is not available.
i) There is no fair system of reward and punishment to employees on the basis of their effort.
j) The Co. has not developed the alternative way to earn profit.
k) The Co. has not developed performance evaluation system.

5.3 Recommendations

Based on the major findings of the study of profit planning and control of NBBUL some suggestions have been recommending in this part. It seems necessary to develop implement and improvement process of profit planning and control in the manufacturing enterprise from very beginning to the end. It is hoped that these recommendations will prove be useful for the management if it is brought into effects.

a) NBBUL should have major program to achieve set up objectives by taking full advantage of the latest techniques.
b) The management of the company needs to increase production and sales volume for the utilization of available capacity.
c) The company should develop long-term strategic plan.
d) The Co. should clearly state its objectives and should have in depth analysis of the company's strength and weakness.
e) Sales budget should be prepared on the systematic approach. Sales forecasting should be made after analyzing all the variables that affected the market of the company.
f) Trained and qualified manpower for budgeting and planning should be hired and present manpower should be trained to develop and implement the profit plan effectively.
g) The company should identify duties and responsibilities clearly for employees. All the departments should be assigned full authority and

should be made accountability to decide and create new ideas to formulate various policies.

h) Alternative supply sources of raw materials should be developed to increase capacity utilization.

i) Company should maintain proper co-ordination between production & market demand.

j) Operating as well as non-operating expenses should be controlled to increase the net profit of NBBUL.

k) Co. should analyze its overhead in a well classified as well as scientific way. It consist production, administrative, selling and distribution overheads systematically.

l) Performance reports should be strictly followed to make conscious towards poor performance and to take corrective action timely.

m) Effective programs should be initiated to improve the productivity of labor, employee morale should be increased and incentive plan should be started to motivated employee.

n) Reward and punishment system should be effective and based on work performance. So internal evaluation must be followed.

o) Selling and distribution expenses should be fixed in terms of sales revenue and marketing programs introduced and implemented.

p) The Co. should launch different types of training and orientation programs within and outside the country for all levels of employees, which help in bringing gaps between motivation and morale.

q) Efforts should be made to avoid the idle working time. Strict supervision is necessary to watch and control the wastage of working hour of the employees.

r) Co. should adopt more effective advertising system to communicate the significance of products because advertising plays most important role in the marketing.

s) Co. should adopt new marketing concept such as pre sales & post sales service and societal marketing.

t) Company lacks the adequate expenses on research and development. It is recommended that certain amount of profit should be allocated in the research and development.

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Website

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APPENDIX - II

Calculation of Correlation Coefficient between budgeted and actual sales by Actual Mean Method

F/Y	X	Y	x = (x-x)	y = (y-y)	x^2	y^2	xy
2004/05	5955	4781	-734	-1124.20	538756	1263825.64	825162.8
2005/06	4430	3558	-2259	-2347.20	5103081	5509347.84	5302324.
2006/07	7360	6927	671	1021.80	450241	1044075.24	685627.8
2007/08	9190	8183	2501	2277.80	6255001	5188372.84	5696777.
2008/09	6510	6077	-179	171.80	32041	29515.24	-30752.2
Total	**∑X = 33445**	**∑Y = 29526**			**∑x^2 = 12379120**	**∑y^2 = 13035136.80**	**∑xy = 124791**

Note: Assuming X as Budgeted Sales and Y as Actual Sales

i. Calculation of Airthematic Mean (A.M.)

For Budgeted sales:

$$\text{A.M. } (x) = \frac{\sum X}{N} = \frac{33445}{5} = 6689$$

For Actual sales:

A.M. (y)

$$= \frac{\sum Y}{N} = \frac{29526}{5} = 5905.20$$

ii. Calculation of Standard Deviation (б)

For Budgeted Sales

$$б_x = \sqrt{\frac{\sum (x-\bar{x})^2}{N}} = \sqrt{\frac{12379120}{5}} = 1573.48$$

For Actual sales:

$$б_y = \sqrt{\frac{\sum (y-\bar{y})^2}{N}} = \sqrt{\frac{130351}{5}} = 1614.63$$

iii. Calcualtion of Coefficient of Variance (C.V.)

For Budgeted Sales

$$C.V._x = \frac{\bar{б_x}}{X} = \frac{1573.48}{6689} = 23.52\%$$

For Actual sales:

$$C.V._y = \frac{\bar{б_y}}{Y} = \frac{1614.63}{5905.20} = 27.34\%$$

iv. Calculation of Karl Pearson's Correlation Coefficient (r)

$$r_{xy} = \frac{\sum xy}{\sqrt{x^2y^2}} = \frac{12479141}{\sqrt{12379120 \times 13035136.8}} = 0.9824$$

APPENDIX - I

Calculation of Correlation Coefficient between budgeted and actual production by Actual Mean Method

F/Y	X	Y	x = (x-x)	y = (y-y)	x^2	y^2	xy
2004/05	5735	4821	-1082	-889.00	1170724	790321	961898
2005/06	4025	2701	-2792	-3009	7795264	9054081	840112
2006/07	7680	6857	863	1147	744769	1315609	989861
2007/08	9760	8107	2943	2397	8661249	5745609	705437
2008/09	6885	6064	68	354	4624	125316	24072
Total	**$\sum X$ = 34085**	**$\sum Y$ = 28550**			**$\sum x^2$ = 18376630**	**$\sum y^2$ = 17030936**	**$\sum xy$ = 1743133**

Note: Assuming X as budgeted production and Y as actual production

i. Calculation of Airthematic Mean (A.M.)

For Budgeted production:

$$\text{A.M. } (\bar{x}) = \frac{\sum X}{N} = \frac{34085}{5} = 6817$$

For Actual production:

$$\text{A.M. } (\bar{y}) = \frac{\sum Y}{N} = \frac{28550}{5} = 5710$$

ii. Calculation of Standard Deviation (б)

For Budgeted production:

$$б_x = \sqrt{\frac{\sum (x-\bar{x})^2}{N}} = \sqrt{\frac{18376630}{5}} = 1917.11$$

For Actual produciton:

$$б_y = \sqrt{\frac{\sum (y-\bar{y})^2}{N}} = \sqrt{\frac{1703}{5}} = 1845.59$$

iii. Calcualtion of Coefficient of Variance (C.V.)

For Budgeted production

$$C.V._x = \frac{\sigma_x}{X} = \frac{1917.11}{6817} = 28.12\%$$

For Actual production:

$$C.V._y = \frac{\sigma_y}{Y} = \frac{1845.59}{5710} = 32.32\%$$

iv. Calculation of Karl Pearson's Correlation Coefficient (r)

$$r_{xy} = \frac{\sum xy}{\sqrt{x^2y^2}} = \frac{17431330}{\sqrt{18376630 \times 17030936}} = 0.9853$$

APPENDIX - III

Calculation of Correlation Coefficient between actual sales and actual production by Actual mean method

F/Y	X	Y	x = (x-x)	y = (y-y)	x^2	y^2	xy
2004/05	4781	4821	-1124.2	-889.00	1263825.64	790321	999414
2005/06	3558	2701	-2347.2	-3009	5509347.84	9054081	706272
2006/07	6927	6857	1021.8	1147	1044075.24	1315609	117200
2007/08	8183	8107	2277.8	2397	5188372.84	5745609	545988
2008/09	6077	6064	171.8	354	29515.24	125316	60817
Total	**$\sum X$ = 29526**	**$\sum Y$ = 28550**			**$\sum x^2$ = 13035137**	**$\sum y^2$ = 17030936**	**$\sum xy$ = 1475484**

Note: Assuming X as Actual Sales and Y as Actual Production

i. Calculation of Airthematic Mean (A.M.)

For Budgeted production:

$$A.M.(x) = \bar{X} = \frac{\sum X}{N} = \frac{29526}{5} = 5905.20$$

For Actual production:

$$\bar{A}.M.(y) = \frac{\sum Y}{N} = \frac{28550}{5} = 5710$$

ii. Calculation of Karl Pearson's Correlation Coefficient (r)

$$r_{xy} = \frac{\sum xy}{\sqrt{x^2y^2}} = \frac{14754847}{\sqrt{13035136.8 \times 17030936}}$$

$$= 0.9903$$

vv

APPENDIX - IV

Nepal Bitumen and Barrel Udhyog Limited

Cash Flow Statement

From the fiscal year of 2004/05 to 2008/09 **Units in Rs.**

Particulars	Fiscal Year				
	2004/05	**2005/06**	**2006/07**	**2007/08**	**2008/09**
A. Cash Flow From Operating Activities					
1. Net Profit(Loss) before income Tax and extraordinary Income and Expenditure	1335915	-6951758	3240671	7702031	3256429
Adjustment					
a. Depreciation	2124759	1740454	1504160	1938729	1587062
b. Interest Expenses	5924954	4505920	5144640	5320372	5821898
c. Provision for Employee Residence	77342		187618	445907	188530
d. Provision for Bonus	133592		324067	770203	325643
e. Special Fee	59768				
f. (Profit)/Loss on sale of Assets	-18462				
	9637868	**-705384**	**10401156**	**16177242**	**11179562**
2. Cash Flow from Working Capital Changes					
a. Increase/(Decrease) in current liabilities	3371731	2766917	-646540	9701586	12631822
b. (Increase)/Decrease in Inventories	-978514	6593222	3213168	5397300	-1075592
c. (Increase)/Decrease in Debtors	-9602538	7417894	-6074952	-36546225	-9318117
d. (Increase)/Decrease in Advance, Loans and Deposits	-486919	-550491	632278	-1889381	-625283
Cash Generated from operations	**1941628**	**15522158**	**7525110**	**-7159478**	**12792392**
Income Tax paid			-726542		-455360
Bonus paid				-315529	-737518
Net Cash Flow from Operating Activities (A)	**1941628**	**15522158**	**6798568**	**-7475007**	**11599514**

APPENDIX - VI

Nepal Bitumen and Barrel Udhyog Limited

Balance Sheet from the fiscal year 2004/05 to 2008/09 Units in Rs.

Details	Fiscal Year				
	2004/05	2005/06	2006/07	2007/08	2008/09
Liabilities					
1. Capital and Reserve fund					
a. Share capital	21068000	21068000	21068000	21068000	21068000
b. Reserve fund and Profit	216908	-6734850	-3822264	2943161	2716755
Total	**21284908**	**14333150**	**17245736**	**24011161**	**23784755**
2. Mid-term & Long- term Loan					
a. Secured Loan	—	—	—	—	—
b. Unsecured Loan	—	—	—	—	—
Total					
Grand Total	**21284908**	**14333150**	**17245736**	**24011161**	**23784755**
Assets					
1. Fixed Assets	**12812663**	**11150215**	**10556536**	**11139260**	**9807692**
Machine Uninstalled	—	**986560**	**986560**	—	—
2. Investment					
3. Current Assets					
a. Inventory	28663094	22069872	18856704	13459404	14534996
b. Debtors	57234755	49816861	55891813	92438038	102211515
c. Cash and Bank Balance	657696	1567241	4617138	3074340	4276458
d. Advance, Loans and Deposit	9086266	9636756	9004478	10893859	11519142
Total	**95641811**	**83090730**	**88370133**	**119865641**	**132542111**
Less: Current Liabilities and Provisions					
a. Current Liabilities	28767442	31463243	29991990	38466246	51007166
b. Short term Loan	54638757	45897581	48204031	60991505	56671500
c. Provisions	3763367	3533531	4471472	7535989	10886382
Total	**87169566**	**80894355**	**82667493**	**106993740**	**118565048**
Net Current Assets	**8472245**	**2196375**	**5702640**	**12871901**	**13977063**

Grand Total	**21284908**	**14333150**	**17245736**	**24011161**	**23784755**

APPENDIX - V

Nepal Bitumen and Barrel Udyog Limited

Income Statement for five years period ending 2008/09

Particulars	**Fiscal Year**						
	2004/05		**2005/06**		**2006/07**		
	Budgeted	**Actual**	**Budgeted**	**Actual**	**Budgeted**	**Actual**	
Sales revenue	**107056000**	**100607031**	**107050300**	**72492383**	**193568000**	**164678755**	**2**
Less:COGS	90836500	87717699	92050800	69596403	176985400	149452072	2
Gross Profit	**16219500**	**12889332**	**14999500**	**2895980**	**16582600**	**15226683**	
Less:Administrative Exps.	5799470	5229792	5545000	5160665	5797700	6008256	
Selling & Distribution Exps.	420580	486517	325670	201212	370600	299441	
Special Fee	—	59768	—	—	—	32808	
Provision for residence	80500	77342	110000	—	220000	187618	
Provision for bonus	1455400	133592	200500		410500	324067	
Total	**8463550**	**6902321**	**8818330**	**-2465897**	**9783800**	**8374493**	
Add: Profit on sale of FA	—	18462	—		—		
Other Income		340086		20059		10818	
EBIT	**8463550**	**7260869**	**8818330**	**-2445838**	**9783800**	**8385311**	
Less:Interest	6125650	5924954	6495700	4505920	5552300	5144640	
EBT	**2337900**	**1335915**	**2322630**	**-6951758**	**4231500**	**3240671**	
Less:Tax	584475	398457	570330		528938	328085	
Net Profit after Tax	**1753425**	**937458**	**1752300**	**-6951758**	**3702562**	**2912586**	