CHAPTER – I

INTRODUCTION

1.1 General Background

Nepal is the small landlocked country of South Asia. It is covered by India in the east, west and south and by China in the north. The area of Nepal is 147181 square kilometers. It has three regions (Himalayan, Hilly and Terai), 14 zones and 75 districts. This area is about 0.3 percent of Asia and 0.03 percent of world. Nepal is extended from east to west with a length of about 885 km and with average width of 193 km from North to South. In Nepal, rocks, snow barren mountains and sloppy hills etc. cover 77 percent of land while 23 percent land is plain type (Terai). Nepal is a Himalayan kingdom, where the highest mountain of world Mount Everest (8848 meter) and lowest point of Nepal i.e. Kechana Kalan of Jhapa District (72 meters) are situated. It has the deepest valley (The Arun valley) in the world. It is small kingdom rich in nature beauty and Himalayas. So, the Natural environment of the Nepal is direcifiable and Sangrila. It is also called the Switzerland of Asia (Pokhrel, 2064: 20).

Nepal lies in the line of least developed country of world with $242 per capita income. It has poor economy. More than 80 percent of the people involved in agriculture actively. But this sector contribution is only 40 – 44 percent of GDP. It is the major source of employment and income of rural people.

Industrialization plays a vital role in the development of economic and it's importance as a means of achieving economic growth and prosperity has been recognized in the economic literature. Industrialization is universally accepted as a strategy of economic development as well as the fundamental goal of most developing countries like most other developing countries one of the important aspiration of Nepal has been to bring about a structural change that would transform its agriculture economy into and industrial one.

Industrialization is the fundamental goal of most developing as well as developed countries. The prevailing state of under development is commonly contributed to lack of adequate industrialization. It is so because most of the economically advanced nations of the contemporary world reached their high standards of living through successful thrust of industrialization. Industrialization is the focal point of economic development of backward countries like Nepal. It is one of the major tools with the aid of which the vicious of backwardness and poverty can be minimized. Industrialization helps the unemployment and unemployment persons especially from the agriculture sector to find alternative models of productive activity and more into much more productive activities. This reduces the unemployment problems and utilizes the resources which help the countries for economic development.

In Nepal, importance of industrialization is realized only after 1930 i.e. after the introducing of first company act of Nepal. Many industries like sugar, jute, match, soap, noodles etc. Now there are so many industries operating from the government and private sector. Now, the pace of industrialization is increasing. Nepal has became the member of WTO. So, the policy of government is free now. It promotes the privatization to increase the participation of general public for industrial development.

Nepal government has operated numerous manufacturing, trading and commercial enterprises, which are called as public enterprises. Among them Dairy Development Corporation (DDC) is one of the public manufacturing company.

1.2 Evolution of Industry in Nepal

For the economic development of Nepal industrial activities are key factors: Handicrafts and cottage industries were found to be established in the country at Lichhabi. In that time the cottage industry of Nepal was very famous in the world. The artistically constructed temples, stone and golden water taps, manufacturing of traditional weapons and metallic utensils etc. it is the evidence of development of some sorts of handicrafts and cottage industries. It should be noted, however, that these was no any organized system for industrial development during that period.

After the unification of Nepal by the King Prithivi Narayan Shah, the great policy was adopted for protecting Nepalese cottage industries by discouraging the import of foreign goods. As a result, the country become self sufficient gradually in the supply of clothes and agricultural products. But after Sugauli treaty of 1816 and Anglo-Nepal trade treaty of 1923 B.S. the popular handicraft and cottage industries of country began to decline and the import of Indian goods was heavily increased.

The modern history of the industrial development process began after 1993 B.S. with the establishment of Biratnagar Jute Mill. After then Nepal Bank Limited, the first modern commercial bank in the country was established in 1994 B.S. in order to develop industrial and Trading enterprises by providing financial and administrative help. Similarly, Ragupati Jute Mill and Morang sugar mil were also established in 2003 B.S. in the country. In this way, a number of industries in different sectors and fields like cotton sugar, textiles, oil, rice, match, hydropower and so on were set up in the South Eastern Terai Region during the Rana period.

After the historical people’s movement in 2007 B.S., the autocratic Rana Regime was overthrown and democracy was introduced in the country but with the political instability. For about a decade, the industrial sector could not be developed in a considerable level. Nepal Rastra Bank was established in the year of 2013 B.S. as the Central Bank of the country to maintain, economic stability of ending dual currency system, issuing its own currency and controlling the exchanging of foreign currency etc. Economic planning was also started for the development of the country from the same year. A lot of attempts were found made during various plan period for the development of industrial enterprises, which are briefly discussed below.

First Plan (2013-18 B.S.)

From the launching of first plan in 2013 B.S., the process of planned industrial development also started in Nepal. The plan aimed to encourage private investment by providing facilities through technical assistance. It also aimed at the revival and expansion of various industry.

In Industrial Development Centre was established in 2014 B.S. which was converted to Nepal Industrial Development Corporation in 2016 B.S. Some industries related to timber, rice and oil were established. Similarly, some selective industries like jute, sugar, match and cigarette were expanded and modernized. And some preliminary works in Patan and Balaju industrial state were initiated. Therefore the first plan created only a base for future industrial development.

Second Plan (2019-22 B.S.)

This plan agreed high priority to industries using domestic raw materials and with labour-intensity, mining, export-oriented and import-substitution industries. The private sector was given some industries like textile, sugar, confectioneries, hotel, metalcrafts, transport, etc. were established in the private sector. In the public sector industries like cigarette (Janakpur Cigarette Factory), Shoe (Bansbari Leather and Shoe Factory) and Sugar (Birgunj Sugar Factory) were established. So on the industrial estates were established in Patan and Balaju.

Third Plan (2022 – 27 B.S.)

This plan also gave priority to the industries using local materials and processing import substitution and export promotives industries. Basic industries like fertilizer and agricultural tools too got high consideration. Two industrial estates (Dharan and Nepalgunj industrial estates) were started. The industries producing sugar, metal utensils, matches and textiles were established. Of the 1257 new industries established during the third plan, 60 percent were small rice mills.

Fourth Plan (2027 – 32 B.S.)

This plan intended to establish cement, paper and fertilizer industries in the public sector, in collaboration with national and foreigners. The industries allocated to the private sector were the ones using local raw materials and agro-based, export-oriented forest-based and mineral-based industries. Industrial services centre was established to provide support facilities.

The new industrial policy was formulated in 2030B.S. The Industrial Act 2031 was the first attempt by the government to formally define industries by size as well as licensing requirements, banking procedures and sales, and on the basis of excise and income tax regulations. Tax holidays were given to the cottage, import substituting, export oriented and tourism industries along with the industries using indigenous raw materials.

Fifth Plan (2032 – 37 B.S.)

This plan had the objective of providing employment to the surplus labour in agriculture through industrial development. It also envisaged the need for self-reliance on consumer goods of daily necessity and some construction materials.

During the plan period the industries like Hetauda Textile Mill, Bhaktapur Brick Factory and Agricultural Lime. Industries were established in the public sector. So as some biscuit, flour mill, insecticides, gas, rolling mill, shop etc. were established by private sector.

Sixth Plan (2037 – 42 B.S.)

This plan had set same objectives as previous fifth plan. The plan intended to transfer even some appropriate industries to the private sector. It was, in fact, the first time that the government was thinking of privatization of industries, which did not exhibit financial efficiency.

The plan also attempted to attract foreign investment by adopting appropriate policies. Various targets were fixed for the establishment and expansion of industries. But achievement was poor. It was due to the new commercial policy of 2037 B.S. that the production and exports of only woolen carpet, ready-made garment and leather increased. Rupees 155 crore was allocated for the public sector.

Seventh Plan (2042 – 47)

The objectives of the seventh plan were to increase the contribution of the industrial sector to GDP, to expand the size of industries to meet the basic needs of the people, to promote export and reduce import through an increase in industrial production. Result was the establishment of some industries in both public and private sector. The industries established in public sector were Bhrikuti Paper Mill, Lumbini Sugar Factory and Nepal Oriend Magnesite Industry. The construction of Udayapur Cement Factory was also initiated.

Eight Plan (49 – 54 B.S.)

This plan has assigned highest priority to develop export-oriented, construction-materials producing, import-substituting and basic industries. The government has handed over some of the public industries in private hand.

The Industrial Enterprise Act 2049 and Industrial Policy 2049 were introduced to enhance private sector participation. In addition Foreign Investment and Technology Transfer Act 2049 and foreign investment and one-window policy 2049 were introduced to attach foreign investment for smooth transfer of technology and speeding up industrial development.

Ninth Plan (2054 – 59 B.S.)

This plan had also the objective to encourage the private sector and the foreign investment. In this period the main objectives were 6 percent increase in economic development, 11-15 percent sustainable growth in industrial production, increase the contribution of industrial sector for Gross Domestic Product (GDP) and identifying the product of competitive strength and comparable advance which can increase the export promoting product and it creates the employment for rural people.

Tenth Plan (2059 – 64 B.S.)

This plan also priorities for private sector to increase Gross Domestic Product (GDP) by expansion of industrial product. And it special focus to small and cottage industries to increase the self-employment of rural people which can help to reduce the rural poverty. It also focus to invite the foreign investment to gain the competitive advantage and gained 7.8 percent of industrial growth was major objectives of tenth plan.

In this way the evolution of industrial development has own history. It is the outcomes of previous efforts and scarification. Before some year the political situation of country was very bad. Many industries were closed. Because of strict and Nepal band many industries were faced different problems which can not gained their objectives. But nowadays we can hole to improve that's situation, which will favourable for industrial environment.

1.3 Introduction to Daily Development Corporation (DDC)

The demand of milk and milk product is gradually increasing so it was found necessary to improve of Daily Development Centre. As a result Daily Development Commission had been converted into Daily Development Board in B.S. 2019. DDC established on 1st Shrawan 2026 as manufacturing enterprises under the corporation act 2021.

The main objectives of DDC is to provide guaranteed market and fair price to the rural milk producers and supply hygienic pasteurized milk and other dairy product to the urban consumers. Due to the public enterprises, its main objective is to fulfill the social benefits rather than earning profit.

The central office of DDC is in Lainchour, Kathmandu. It has broadened functioning in 40 districts with 42 milk cooler center, and 1200 milk collector cooperative firms. In the present, approximately 1200 permanent and daily wage workers are working in the corporation.

DDC is totally owned by Nepal Government. It has also financial support in the form of foreign grants and loan. As a financial support, world food program has been supporting since B.S. 2030/31. Similarly, New Zealand Government, Netherlands Government, U.S. Government, World Bank and Danish Government are also providing financial support to DDC.

The Board of directors consists of 8 directors of whom 2 directors are from Ministry of Agricultural and Co-operative. The co-operation is headed by and executive director who is responsible and accountable to the Board of Directors.

DDC has been collecting cow milk, Buffalo milk and Chauri milk from the mild producers around the country. DDC has been playing vital role to uplift the economic status of rural farmers. So, it has been recognized as an effective tool for poverty alleviation and economic development of rural farmers.

DDC could not buy all the milk offered by the farmers especially during the flush season. As a consequence, it had to impose milk Holiday on certain days during the period. On the other hand, during the lean season DDC has been importing skimmed milk powder to meet consumer's demand. So the DDC is playing an important role to improve the economic condition of milk producers and rural community. DDC is proving various product line in the market which are as follows:

(1) Pasteurized milk	(2) Curd	(3) Ice-cream	(4) Ghee
(4) Scheme milk powder	(5) Butter	(6) Paneer	(8) cheese

1.4 Objectives of DDC

These are the main objectives of DDC:

1. To provide the rural farmers, guaranteed market for milk by providing fair price.
2. Providing pasteurized milk and milk production in the market.

3. Develop network to organized milk collection system to meet the higher demand of milk and milk products.
4. To keep up the economic growth in rural community.
5. Develop systematic marketing system for pasteurized milk and milk product in urban area.

1.5 Statement of the Problem

Government of Nepal has established different public enterprises during the different plan period with different objectives. The objectives stated in various plan documents were accelerating the rate of a economic growth, generation employment, economic equality, utilization of natural resources, contribution in government exchanger. Most of the public enterprises are not fulfilling the objectives because of less utilizing the capacity and ancient technology. At present public enterprises are becoming the burden of government budget that's why question mark has been raised about the public enterprises.

Now-a-days the public enterprises are suffering from accurate estimation of sales and production. In other word, there is not balance in sales and production, which has two results. First, sales is less than production; in this condition the firm has more production but sales volume is very few which invites the problems of overstocking of inventory (unsold product), that results the cost is increased for managing over inventory. So on second is, production is less than sales. In this case, there will be lack of stock for sales or there will not the goods (product) for sales, which also increase the loss of profit because sales can not be made according to their demand. And also other negative aspects are the customer are lost and the image or reputation also lost.

So, the main problem is how to co-ordinate between production department and sales department and also how to keep optimum level of inventory in DDC. The main problem observed on surface of sales and production planning by DDC can be listed below:

1. How does DDC adopting the PPC at present?
2. How to analyze the sales planning and inventory policy prepared by DDC?
3. Why does there fluctuation at inventory level (production)?
4. Why does there different between budgeted and actual achievement?
5. Is there efficient financial position?

1.6 The Objectives of Study

The main objectives of this study is to evaluate and examine the techniques of profit planning and control (PPC) applied by Dairy Development Corporation (DDC). The specific objectives are as follows:

- To review the present PPC adopted (using tool of PPC i.e. sales and production budget) by DDC.
- To analyze the sales budget (planning) and inventory policies prepared by DDC.
- To evaluate the variance between budget and actual achievement of DDC.
- To analyze the financial performance of DDC.
- To provide the suggestions and recommendations for improving the production and sales planning for DDC.

1.7 Significance of the Study

Co-ordination between sales and production is very importance for manufacturing industry. Over and under production brings different problems, which increases the cost and losses the profit. So, the researcher has thought that the study will be very importance to improve the performance of Dairy Development Corporation (DDC). The significances of this study are as follows:

- The study will be useful to concern bodies to keep their attention on reducing account irregularities.
- This is creative research about the related field, which may provide material for the interested concerns.
- This study will be helpful in profit planning system so that it controls the unnecessary expenses of the firm.
- This study focuses on the application of systematic approaches of profit planning and analyzes the effectiveness, problem and solution of the problems.

1.8 Limitations of the Study

Different practical and technical problem have been found during its study which are considered as its limitations.

- This study will focus only the production and sales planning so it does not represent the other sector of the corporation.
- The study will be concentrates on trend analysis of the data of the seven year from 2060/61 to 2066/67.
- The study will be made by used of secondary data and some primary data are also introduced asking the representative of the company.
- The study does not assesses the statement of broad objectives, goals, basic strategies, planning premises, protect planning and financial plan.
- The methods, theories and standards employed in the study will have its own limitation and assumption.

1.9 Organization or Structure of the Study

Organization of study refers to the management of research work for the effective analysis. The study will be divided into five chapters as mentioned below:

I. Introduction This chapter deal with the general background of study, introduction of corporation and its objectives, statement of problem, objectives importance and limitation of study.

II. Review of Literature This includes two parts: one is the conceptual framework which includes the fundamental concept and component of profit planning and control and sales and production planning (budgeting) and second is review of previous related studies about DDC.

III. Research Methodology This chapter followed to achieve the purpose of the study has been described. It includes research design, nature and sources of data, population and sample, data gathering method and instrument and data processing.

IV. Presentation and Analysis of Data This chapter includes the tabulation and analyzing the collected data through different sources. We use various analysis tools and techniques here based on the analysis of the research, questions we have been tried to answer and major findings regarding this study also have been included.

V. Summary, Conclusion and Recommendation This includes the theme of the whole study. At last few recommendations for the improvement of the sales and production planning and other plan performance for Daily Development Corporation.

At the end of the study bibliography, appendix and questionnaires are also incorporated.

CHAPTER - II

REVIEW OF LITERATURE

2.1 Introduction

2.1.1 Profit

There are several interpretations of the profit. An economist says the profit is reward for entrepreneurship for his risk bearing so on other's says about the different definition of profit. It is a primary objective of business. Profit is a signal for the allocation of resources and a yard stick for judging managerial efficiency. The survival measure of the effective performance of a business is profit. Profits are the primary measure of success of the business enterprises. Profits are the acid test of business enterprises performance. Simply, profit is the excess of income over cost of production".

The entrepreneur earns profit for organizing and co-ordinating the other factors of production land labour and capital of the purpose of producing goods. Various economists have different views in respect of the term profit. According to Howley, Profit is the reward for risk taking in business. Schumpter opines that an entrepreneur earn profits as rewards for his introducing innovation. J.M. Keynes held the view that profit resulted from favourable movements of the general price level. Mrs. Joan Robinson and Chamberlain opined that the greater the degree of monopoly poner the greater the profits made by the entrepreneur.

Finally, it should be noted that profits are residual income left after the payment of the contractual rewards to other factor of production. The difference between outflow and inflow is profit. Inflow means the income from sales or other's receipt and outflow means the cost of producing and selling the product. Profit as the reward of bearing risk, uncertainties and the reward of successful innovation. It is obtained by subtracting the cost from revenue.

Profit = Total Revenue – Total Cost of Production and Selling

2.1.2 Planning

Planning is deciding in advance what is to be done in future. Planning is the feed forward process to reduce uncertainty about the future. The planning process is the feed forward process to reduce uncertainty about future. The planning process is based on the conviction that management can plan its activities and conditions the state of the enterprise determines its destiny. Planning is a systematic method of thinking out acts and purpose before hand. It is the first essence of management and all other functions are performed within the framework of planning. It is the basis foundation of profit plans.

Planning should start by deciding and defining the objectives of the company, making sure in the process that there are compatible with the skills and resources of the under taking. Planning is essential to accomplish goals. It reduces uncertainty and provides right direction to the employees by determining the course of action in advance. Formal planning indicates the responsibility of management and provides an alternative to grouping without direction. Planning on the other hand, involves the determination of what should be done, how the goal may be reached and what individuals are units are to assume responsibility and be held accountable.

Planning is the process of developing enterprise objectives and selecting future courses of action to accomplish them. It includes.

I. Establishing enterprises objectives.

II. Developing premises about the environment in which they are to be accomplished.

III. Selecting a course of action for accomplishing the objectives.

IV. Initiating activities necessary to translate plans into action plan.

V. Current re-planning to correct current deficiencies (Glenn et al. 1990: 3).

Planning and forecasting are also not same things. Forecasting is a component of planning or it is a prediction of future event, condition or situation. But plan includes a program of intended future actions and desired result. Forecasting is a prediction of what will happen on the basis of certain assumptions. Planning can be performed under conditions of certainty, uncertainty or ignorance about future. It is in those situations involving uncertainty and forecasting provides the maximum help to planners. When certain exist, forecasting does not require much more effort since prediction about the future is trivial. When there is ignorance the most that forecasting can do provide some clues about future possibilities.

However, such clues cannot be provided unless some information is available and which the forecast can be based. In many organizations the major purpose of forecasting is to reduce uncertainty and minimize ignorance.

In this way planning is an intellectual process rational way, a systematic way, goal oriented task, primary function of management and it directs all managerial activities and it is directed towards efficiency.

2.1.3 Profit Planning

After discussing about the profit and planning, it becomes easier to know that what profit planning is. Simply profit planning is planning for future operation in such a way as to maximize the profit. It is a managerial process, which helps management to perform planning function effectively. A comprehensive profit planning is also known as broad budgeting schedule developed in financial statement. Profit planning deals with the development of objectives, specification of short-term goals and development of strategic and tactical profit plan. It is an importance approach developed to facilitate the effective performance of management process.

“The concept of comprehensive profit planning encompasses systematic integrated approaches of profit planning and strategic planning. The descriptive term comprehensive profit planning used other term in the some context are business budgeting, managerial budgeting and others budgeting" (Glenn, 1990: 31).

Profit planning means the development and acceptance of objectives and goals and moving or organization efficiency to achieve the objectives and goals. Profit planning is not a separate technique that can be through of the separated independently of the total management process. The broad concept of profit planning entails on integration of numerous managerial approaches and the techniques that might be exploited such as sales forecasting, sales quota system capital budgeting, cash flow analysis, cost volume profit analysis variable cost budget etc. profit plan or budget is a comprehensive statement of the intention, expressed in financial terms, for the operations of the firm for a short period. It is a plan of the firm's expectations and used as a basis for measuring and controlling the actual performance of manager and their units.

"Profit planning or budgeting is a forward planning and involves the preparation in advance of quantities as well as financial statement to indicate the intention of management in respect of various aspects of the business. Profit planning in fact is a managerial techniques and it is a written plan in which all aspects of business operation with respect to define future period are included. It is a formed statement of policy, plan, objectives and goals established by the top management in respect of some future period, profit planning is predetermined detail plan action developed and distributed as a guide the current operation as performed. Thus, we can say that profit planning is a tool which may be used by the management in planning the future course of action and in controlling the actual performance" (Gupta, 1990: 521).

"The profit planning and control involves:

- Development and application of broad and long term objectives of the enterprises.
- The specification of enterprise goals.
- Development of strategic long-range profit plan in broad terms.

- Specification of a tactical short range profit plan detailed by assigned responsibilities (division, department products).
- Establishment of a system of periodic performance reports detailed by assigned responsibilities.
- Development follows up procedures (Glenn et al., 1990: 30).

At last we conclude profit planning refers to the organization techniques and procedures were by long range, short range plan are formulated, considered and approved, responsibility for execution is delegrated, flexibility to meet changing is provided, progress in working the reported deviation in operations are analyzed and corrective action requires to reach the desired objectives is taken.

2.1.4 Planning Levels

2.1.4.1 Strategic Long-Term Planning

Long range planning covers five years and more varying with the enterprises sometimes extended beyond 10 years. Long range planning is one of the most difficult time spans involved in planning. As many problems in short range planning cannot be treated due to the absence of clear sense of direction and the practices, which a comprehensive long-range plan provides.

“To be successful a long range plan provides achieve the following objectives:

- In corporate the engineering department’s development and support expenses for new product features.
- Review the plant capacity, personal requirement in light of start up products and existing plant capitalization.
- Identify future capital requirement for developing departments, the manufacturing process and support departments such as management information system and the building structures.
- Reflect changes in cash requirement for salaries, materials, capital etc.

- Consider what impact will be in inflation fringle, benefits, product cost and in overseas operations, the projected impact of exchange will have on the long-range profitability of plant (Glenn et al., 1990: 82-83).

2.1.4.2 Medium Term Planning

The medium term planning covers of 2 to 3 years. Medium term planning is used mainly to determine the allocation of resources among completing activities and to revise.

Medium term planning often takes the forms of budgeting in which each division, department or unit is allocated certain resources during the coming years. These allocations are based in fact on forecasting of demand, cost, financial position and competition. The important and frequency of medium term planning make it worth while to spend more effort and employ more elaborate prediction than in the case for shorter time horizons. Often it may be wise to use more than one method in order to check and compare the accuracy of results.

2.1.4.3 Short Term Planning

It is also called tactical plan. It is to be developed for short period of time. The short term planning is selected to confirm to fiscal quarters or year. Because of practical needed for conforming plans of according periods and the some what arbitrary limitation of the long range to three to five years is usually based as been indicated on the certainty over long period makes planning of questionable value. Short-range planning is a limited five dimension usually it covers one year time period. Management uses it as a substantial part of long range and medium range plan.

2.1.5 Profit Planning Process

Profit planning process should involve periodic consistent and depth replanning so that all operations should carefully re-examined and re-evaluated. There are several steps in profit planning process which is discussed below.

2.1.5.1 Identification and Evaluation of External Variables

It is basic function of profit planning process. In this stage the profit planning process focuses on (a) identifying and (b) evaluating the impact or effect of external environment, which will have significant impact on the enterprises. As the management planning focuses on the best possible manipulation of controllable and non-controllable variables are considered separately. This is done in order to minimize the potential unfavourable impact.

A particularly significant phase of this analysis includes the evaluation of the present strength and weakness of the enterprise. Planning must start with objectives and realistic understanding of the present status of products, services, markets, profit and return on investments, case flow, availability of capital, production capabilities and the competences of both management and non management personnel. So, analysis and evaluation of the environmental variables must be a continuing concern of management. This activities should involve all executive managers, who in turn should export carious staff groups to provide data and recommendations (Glenn et al., 1990: 74-75).

2.5.1.2 Developing of the Broad Objectives of the Enterprise

In this stage of the statement of objectives should express the mission, vision and ethical character of the enterprise. Its purpose is to provide identity, continuity of purpose and definition. However, the statement of broad objectives normally should not specify the quantitative goals. Rather, it should be narrative expression of the purpose, objectives and philosophical character of the business. It should be signed for wide dissemination and should be believable, which means, in the long run the company's action must be harmony with the statement (Glenn et al. 1990: 75-76).

2.1.5.3 Development of Specific Goals for the Enterprise

In this stage of process bring the statement of broad objectives into sharper focus and to move from the realm of general information to more specific planning information it provide both narrative and quantitative goals that are definite and measurable. There are specific goals that relate to the enterprise as a whole and to the major responsibility centers. Executive management should exercise leadership in this planning phase so that there will be realistic and clearly articulated framework within which operations will be conducted towards common goals. This statement of specific goals should define such operational goals as expansion or contraction of products and services lines, geographical areas, share of the market by major products service lines, growth trends, production goals, profit goal's, profit margins, return on investment and case flow. When the goals are specific they could offer basis for performance measurement (Glenn et al., 1990: 77-78).

2.1.5.4 Development and Evaluation of Company Strategy

The purpose of developing and disseminating enterprises is to find the best alternatives for attaining the planned broad objectives and specific goals. Strategic focus on "how", therefore they outline a plan of action for the enterprise. Executive management must be creative and directly involved in the development of new strategies and in the adaptation of currently on going strategies in harmony with the relevant variable with which management must cope. While developing the basic enterprise, the executive must focus on identification of the critical areas that influence the long-range success of the enterprise. Critical area should be pinpointed through evaluation concern to executive management, periodic reassessment of the strategies is essential in the light of a careful analysis of all relevant variables and their probable future impact on the enterprise (Glenn et al., 1990: 78-79).

2.1.5.5 Executive Management Planning Instructions

This phase involves communication of the substantive plan to middle and lower management level. It explains the broad objectives, enterprise goals, strategies and any other to develop the strategic and tactical profit plans. The executive planning instruction issues by the top management communicate the planning foundation that is necessary for the participation of all levels of tactical profit plans for the upcoming budget year. At this point of planning process, the foundation has been established to articulate the broad and specific objectives of the enterprise and the strategic that facilitate their attainment (Glenn et al., 1990: 79).

2.1.5.6 Preparation and Evaluation of Project Plans

Project plans encompass periodic plans and project plan for improvement of present products, new and expanded physical facilities, entrance into new industries, exit from products and industries, new technology and other major activities that can be separately identified for planning purpose.

The nature of projects is such that they must be planned as separate units. In planning for a project, the time span considered must normally be the anticipated life span of the project. Projects approved must then be timed into the strategic and tactical profit plans. In addition to any going projects, management should encourage on a continuing basis project proposals from any source within the enterprise. Consistent with the approach, during the formal planning cycle, management must evaluate and decide upon the plans status or each project in process and select any new projects to be initiated during time dimensions covered by the upcoming strategic and tactical profit plans (Glenn et al., 1990: 79-80).

2.1.5.7 Development and Approval of Strategic and Tactical Plans

When the managers of the various responsibility centers in the enterprise receive the executive management planning instructions and the project plans, they can begin intensive activities to develop their respective strategic and tactical profit plan. The strategic long-range plan and the tactical short-range profit plan are usually developed at the same time. It is generally seen that the executive management develops the strategic and tactical profit plans but the backlash of this practice is that this denies the full participation by middle managers in the planning process. And this can give rise to unfavourable behavioural effects. So, here we assume a participatory planning and the manager of each responsibility centers have received instructions of the executive managements. Now the manager of each responsibility center to develop a strategic long-range profit plan and in harmony with the long range plan, a tactical short range profit plan. However, a certain format and procedural instructions should be provided by a centralized source to establish the general format, amount of detail, and other relevant procedural and format requirement essential for aggregation of the plans of the responsibility centers into the overall profit plans.

After the completion of the two profits plans the approval must be initiated. This process involves approval, disapproval or revision based on action by executive management or presentation and justification by the managers of the responsibility centers to the next higher level of authority (Glenn, et al., 1990: 80-81).

2.1.5.8 Implementation of Profit Plan

Implementation of management plans that have been developed and approved in planning process involves the management function of leading subordinates in attaining enterprise objectives and goals. Thus effective management at all levels requires that enterprise objectives, goals, strategies and policies be communicated and understood by subordinates. There are many facets involved in management leadership. However, a comprehensive profit planning and control programme may aid substantially in performing this function. plans, strategies and policies developed through significant participation establish to foundation for effective communication.

The plans should have been developed with the managerial conviction that they are going to be met or exceeded in all major respects. If these principles are effective in the development process, the various executive and supervisors will have a level of clear understanding of their responsibilities and the expected level of performance, which will ultimately lead to effective implementation of profit plans (Glenn, et al., 1990: 84-85).

2.1.5.9 Use of Periodic Performance Reports

As profit plan are being implemented during the period of time specified in the tactical plan, periodic performance reports are needed. These performance reports are prepared by the accounting department on a monthly basis. Also some special performance reports are prepared more often on “as needed” basis. These performance reports (a) compare actual performance with planned performance and (b) show each difference as a favourable performance variation.

A clear distinction must be made between external and internal financial reports. Internal report can be further classified as (a) statistical reports that give the basic quantitative internal statistics about the operation of the enterprise; (b) special managerial reports about non recurring and special problems; and (c) periodic performance reports. The latter reports focus on dynamic and continuous control tailored to the assigned managerial responsibilities. These reports are primarily repetitive, short-term reports developed for each of the responsibility centers. Short-term performance reporting is essential for effective control.

2.1.5.10 Use of Flexible Expenses Budget

The flexible expenses budget is also referred to as the variable budget, sliding scale budget, expenses control budget and formula budget, which applies only to expenses. It is completely different from profit plan but it is used to complement it. It gives realistic information about expenses that make it possible to compute budget amount for various output volumes or rates of activities in each responsibility center. To do this the flexible budget provides a formula for each expense in each responsibility center. The formula gives the relationship of each expense to output in the center. Each formula includes a constant expenses factor and a variable expenses rate. To apply this concept in a department, each expense must be classified into the three categories (a) fixed expenses, (b) variable expenses, (c) semi-variable expenses. In the case of a fixed expense the variable rate is zero and in the case of a variable expense, the constant factor is zero and in the case semi-variable expenses, there is a value for both the constant factor and the variable rate.

Flexible expenses budget formulas can be used in two phases of the PPC process (tactical profit plan). If the flexible expenses formulas are developed concurrently with the strategic and tactical profit plan, they are used to computer the budgeted expenses amounts in the tactical profit plan. This is done by multiplying the planned output or activity of each responsibility center by the related variable expenses rate for each center and then adding any fixed cost for the center. Flexible expenses budgets are usually constructed early in the budget planning period because, as indicated, they provide cost data for the tactical profit plan (Glenn, et al., 1990: 86-87).

2.1.5.11 Implementation of Follow-up

Follow-up is an important part of effective control. Because performance reports are based on assigned responsibilities, they are the basis for effective follow-up action. It is important to distinguish between the causes and effect. The performance variation are effects (the result) and the management must determine the underlying causes. The identification of cause is primarily a responsibility of line management. Analysis to determine the underlying causes of both favourable and unfavourable performance variances, should be given immediate priority. In the case of favourable performance variance, after identifying the basic cause as opposed to the results, an alternative for corrective action must be selected and the corrective actions be implemented. If performance variances are favourable, the underlying causes should be identified and this is helpful improving efficiency (Glenn, et al. 1990: 88).

2.1.6 Importance and Limitation of Profit Planning and Control

2.1.6.1 Importance

After knowing the meaning and process of profit planning control it is useful to know about it's importance. It can be adopted to any business at any condition. It is very important to emphasize on developing positive reinforcement, improving motivation, developing goals copying with the effect of budgetary pressure, resolving budget padding problems and using budget control. There are some importance of profit planning and control, which are shown below (Glenn, et al., 1990: 60-61).

1. It focuses 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 enterprise.
3. It compels all member of management from topdown, 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 down 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 supervision are needed.
10. It frees executives from many day-to-day interval problems thought predetermined policies and clear-cut authority relationship. It thereby 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 enterprises.
18. It 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 tends and conditions.

2.1.6.2 Limitation

The following main arguments are usually given against profit planning and control or they are main limitation of profit planning and control (Glenn, et al., 1990: 60).

1. It is difficult, if not possible, to estimates revenues and expenses in our company realistically.
2. Our management has not interest in all the estimates and schedules. Our strictly informal system is better and work 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 strait jacket.
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.

2.1.7 Development of Profit Plan

The management decisions in developing the profit plan were the statements of broad objectives, specific goals and basic strategies. The profit plans are based on structured planning process that includes a series of different sub-plans.

1. The sales plan or budget.
2. The production plan or budget.
3. The material plan or budget.
4. The direct labour plan or budget.
5. Expenses plan or overhead budget.
6. Flexible expenses plan or budget.
7. Capital expenditure plan or budget.
8. Cash budget.

2.1.7.1 The Sales Plan or Budget

Sales planning are the foundation of all other budgets. It is most important but difficult to prepare. Sales plan provides basic management decision about marketing. Marketing decision are the basic approaches for developing a comprehensive sales plan. Since, the sales planning process is a necessary part of Profit Planning and Control (PPC).

A sales plan should be realistic. If it is not realistic, most other parts of the overall profit plan also are not realistic. So, management should develop a realistic sales plan. If management cannot develop realistic sales plan, it will be little justified. Similarly, if it is difficult to assess the future revenues of business, there are little incentives for investment.

A comprehensive sales planning includes strategic and tactical sales plans. A sales plan incorporates such management decision as objectives, goals strategies etc. These translate into planning decisions about planed volume of goods, services price, promotion and the other sales effect.

The purposes of a comprehensive sales plan are as follows:

1. It reduces future uncertainty about future revenue.
2. It incorporates management judgment and decisions in planning process.
3. It facilitates management to control of sales activities.

Factor Consideration in sales Planning

The following factors should be considered while preparing sales plan:

- General economic conditions.
- Sales trends of specific products.
- Anticipated results of advertising and promotional campaigns.
- Effect of proposed price change.
- Entrance of competitor in market.
- Shifting of market.
- Introduction of new, improved, substitute products by company of its competitors.
- Company's productive capacity.
- Government rules and regulations etc.

Sales Planning and Forecasting

It is important to make distinction between sales planning and forecasting because they are confusing and ambiguous. A forecast is not a plan. It is a statement of future condition about a particular subject based assumptions. It may be accepted or rejected or modified or rejected by management. Therefore, it is only one input of a compressive sales plan. A sales plan incorporates all management decision that are based on forecast, other inputs and management judgment about such related items as sales volume, price production, financing.

Therefore, a sales plan is not conditional but forecast is conditional. It is also technical staff function.

The difference between sales plan (budget) and sales forecast can be explained as follows:

- Forecasts are merely well educated estimates or inference about future probable events whereas a budget relates to planned events and is the quantitative expression of business plan and policies to be pursued in future.
- Budgeting begins where forecasting ends. In fact, forecasting provides the logical basis for preparing the budgets.
- A budget provides standard for comparison with the results actually achieved, thus, it is an important control device of management, whereas forecasting represents merely a probable event over which no control can be exercised.

Long-range and Short-range Sales Plan

Long range sales plan is known as strategic sales plan. Usually it is of 5 to 10 years. It is to be developed in broad and general management policies and assumptions by year and annual amount. Usually it is prepared by considering future market potentials, population changes, state of economy, industry projections, company objectives and long-term strategies because they affect in such area as pricing development of new product line, innovation of product, expansion of distribution channel, cost patterns.

Short-range Sales Plan is also called tactical sales plan. It is to be developed for short period of time detailed by products, months and quarters for future 12 months. Tactical sales plan includes detailed plan for each major products and for grouping of minor products. Short-term sales plans are usually developed in terms of physical units of jobs and in sales or dollars. For planning and controlling purposes, short-term sales plans must be developed by sales responsibility. Because short-term profit plan provides major considerations for planning and controlling purposes, it is also necessary for completing other components of profit plan.

Development of Comprehensive Sales Plan

The following process should be followed to develop a comprehensive sales plan:

Step -1 Development management guidelines specify to sales planning including the sales planning process and planning responsibilities.

Step - 2 Prepare one or more sales forecast consistent with specified forecasting guidelines including assumption.

Step - 3 Assemble all the other data that will be relevant in developing a comprehensive sales plan.

Step - 4 Based on above steps apply management evaluation and judgment to develop a comprehensive sales plan.

Step - 5 Secure managerial commitment to attain the goal specified in the comprehensive sales plan.

Table 1

Components of Comprehensive Sales Plan

Components	Strategic Plan	Tactical plan
Management Policies and Assumption	Broad and General	Detailed and Specific for the year
Marketing Plan (Sales and Service Revenue)	Annual amounts major groups	Detailed by product and responsibility
Advertising and promotion plan	General by year	Detailed and specific for the year
Distribution (selling) expenses plan	Total fixed and total variable expenses by year.	Fixed and variable expenses by month and responsibility.

(Fago, 2004: 6-8)

2.1.7.2 The Production Plan of Budget

The production planning refers to the development of policies about optimum production level, use of production facilities and inventory levels. Production planning is the second step of profit planning and control. The main areas of production planning are quantities planned in marketing budget, adjusted to confirm to production and inventory policies, volume of outputs that most be manufactured by product and interim time period.

Production planning can be expressed in equation as under

Production unit = planned sales + Final inventory – Initial Inventory

Therefore, the main components of production budget are production finished goods inventory, work in – process inventory.

So on a production budget is a quantity budget which lays down the quantity of units to be produced during budget period. The main purpose of this budget is to maintain optimum balance between sales, production and inventory position of the firm. The following steps should be followed to develop a production budget.

Step 1: To establish policies for inventory level.

Step 2: To plan the total quantity of each product that is to be manufactured during the budget period where the sales unit should be considered.

Step 3: To schedule this production by interim period when the production plan has been completed by a production manager, (i.e. monthly, quarterly etc.) it should be provided to the executive committee for evaluation and then to present for tentative approval period to use as a basis for developing the direct material, direct labour and factory overhead.

The production planning has different areas which can be explained as below:

Direct Market Sales: When the production is based only with market demand, the production process starts after the demand of goods. In case of job or, unit production system production budget is not necessary. The quantity produced is always equal to the quantity sold.

For Inventory: When the nature of product is scarce, firm can manufacture goods in full capacity. In other words, when demand is higher than supply, the firm can produce goods as much as possible. Therefore, production budget is not necessary. The quantity produced is always equal to the quantity sold.

For Sales and Inventory: Production budget is importance when goods are produced for either selling or storing purpose. In this case, budgeted sales and inventory affects the production volume of the firm. Therefore, the objective of the production should be clear.

Responsibility for Production Planning

Different people have different responsibility for preparing production planning in manufacturing industry which is explained below.

i. **Chief Executive:** The responsibility of chief executive is to formulate objectives and policies of organization. They are as follows:
   - Production policy: Stable production policy vs unstable production policy.
   - Inventory policy: Stable inventory policy vs unstable inventory policy.
   - Flexibility in both production and inventory policy.

ii. **Sales Manager:** Production plan bases on the sales budget. The accuracy of production budget depends on the accuracy of sales plan. The sales manager is responsible to provide accurate sales budget in time.

iii. **Production Manager:** The production manager is responsible to prepare production plan for the company. Production planning, scheduling, dispatching of goods in time are the functions of the production manager. Therefore, production manager prepares the production budget considering availability of personal, plant capacity, raw materials and parts and technology.

iv. **Production Supervisor:** Production supervisor makes a tactical production plan. He/She must know about standard rate of direct material and direct labour production hours, strike, seasonal variation and other areas of tactical plan.

v. **Administrative Manager:** Administrative manager must appoint the required number of labour and personal. The appointment must be optimal and the required skilled manpower must be provided in time. Therefore, personal policy affects the production policy of organization.

vi. **Financial Manager:** The financial manager must provide standard rate, historical data and capital additional plan in time. The financial position must be strengthened before production to pay the wages to the labourers, cost of raw material, overhead expenses and purchase the additional plant and tools.

Factors Consideration in Production Planning

The following factors are to be considered for production planning:

- Plant capacity.
- Availability of raw materials.
- Types of raw materials.
- Availability of capital.
- Availability of labour.
- Timing of production.
- Establishment costs.
- Economic lot size.

Production Policies

There are three types of production policy which are given below:

Stable Production Policy or Unstable Inventory Policy: In this policy, fixed units are to be produced equally in every month or specified period while the final inventories of finished goods are to be unstable. Therefore, budgeted sales of that period are unequal. There are several advantage and disadvantages for applying this policy which are as under:

Advantages

- It utilizes the full capacity.
- It reduces labour turn over.
- It ensures regular supply of raw materials.
- It ensures availability of skilled manpower.
- It ensures stability of employment.
- It increases in efficiency.
- It attracts better employees.
- It reduces in training expenses.
- It ensures volume discount or raw material purchase.
- It avoids idle capacity.

Disadvantages

- It needs high storage facility.
- It needs high capital requirement.
- It has high risk on inventory.

Unstable Production Policy or Stable Inventory Policy: In this policy units of final inventory are to be stable at the end of each period and production units are to be fluctuated in each budget period. The number of units produced and budgeted sales are directly related. This policy have also some advantages and disadvantages which are as under.

Advantages

- It has low storage problems.
- It requires low capital requirement.
- It has low inventory cost.
- It ensures proper preservation of inventory.
- It has less obsolescence due to lack of inventory.

Disadvantages

- It has low efficiency of employee.
- It has high labour turn over.
- It needs high training expenses.
- It cannot ensure regular supply of raw material.
- It ensures increase idle capacity.

Flexible in Both Inventory and Production: In this policy, production unit and inventory level differ from time to time in the specified budget period. This policy is useful when the market (factor effecting of sales) is fluctuating time to time.

Production Control

The production control system is an importance part of production plan. It is an important tool used for managerial control of cost, time, quantity and quality of goods. The major procedures of production control are given below:

- Material Control
- Analysis of production process by responsibility centers in the production division.
- Routing
- Scheduling
- Dispatching
- Follow-up (Fago, 2004: 30-35)

2.1.7.3 The Material Plan or Budget

Planning and controlling of material purchase and material use is a comprehensive profit, planning and controlling of raw material and parts involved in production process. In other word, material budget co-ordinates raw material and part required for production, inventory level of raw material and parts that must be purchased. Raw material budget is prepared after the planned production. The objectives of material budget are as follows:

- To provide quantity data for purchase of material and parts.
- To provide quantity data to compute material cost per unit.
- To establish effective inventory policy.
- To prepare effective cash budget.
- To introduce effective control system on material use.

The followings are the main components of material budget:

Material and Parts Budget

It helps to determine the quantities of materials and parts needed for production. It is determined as under.

Material budget = planned production × standard usage rate.

Material and Parts Purchase Budget: It includes the quantities of materials to be purchased, estimated price and the required inventory level for seasonal variations. Timing for purchase and quantity to be purchased can be determined as follows.

Timing for purchase/Re-order point = Replacement Stock + Safety Stock

Quantity to be purchased (Economic order quantity)

$$\text{EOQ X} \sqrt{\frac{2\text{Ao}}{\text{c}}}$$

Where,

A = Annual requirement in unit.

o = Ordering cost per order.

c = Carrying cost of carrying one unit of inventory for one year.

Purchase of material can be determined as follows:

Purchase = Material usage + closing stock of raw material – opening stock of raw materials

Materials/Parts Inventory Budget: Material inventory budget refers the budgeted level of material and parts inventory in terms of units and cost. In other word material inventory budget deals with the difference between the required quantities budget and purchased unit budget. It can be computed as follows.

Closing stock of raw materials = Opening stock of raw material + purchase of raw material – material usage of raw material.

Cost of Materials and Parts Budget: Cost of material and parts budget is planned cost of the materials parts used in production process. It should be computed as follows:

Material cost = Material usage × Material cost per unit

(Fago, 2004: 67-68)

2.1.7.4 The Direct Labour Plan or Budget

Planning and controlling labour costs involve major and complex areas (1) human resource needs, (2) recruitment, (3) training, (4) job evaluation and specification, (5) performance evaluation, (6) union negotiations, and (7) wage and salary administration. Labour costs are composed of all expenditures incurred for employees: top executives, middle management personnel, staff officers, supervisor, foremen, skilled workers and unskilled workers. It is necessary to consider separately the different types of labour cost.

Direct labour budget is also developed from the production budget. Direct labour requirements can be computed by multiplying product to be produced in each period by the number of direct labour-hours required to produce each unit.

Components of Direct Labour Budget

Basically, there are three components of direct labour budget.

(i) Direct Labour Hour Budget: It estimates the total direct labour hours required for each product by time and responsibility. It is computed as:

Total direct labour hour required = Planned production × standard time required per unit of output.

(ii) Manpower Budget: It estimates the number of each kind of manpower by department and time.

Number of labour = Total labour hour required | working hour per period per time (month)

Working hour per person per month = Normal working hours per person per day × working days in a time (month)

(iii) Direct Labour Cost Budget: It estimates the total direct labour costs by product, time and responsibility. To get direct labour cost budget, first estimate the average wage rates by department, cost center or operation. Then, multiplication of the standard time per unit of product by the average wage rates gives the labour cost per unit of production for department, cost center or operation. The multiplication of the department's cost center's or operation's total unit by the unit labour cost rate gives the total direct labour cost for each product.

Approaches Used in Planning Direct Labour Time

Time and Motion Studies: It is made by industrial engineers. They analyze the operations required on a product and determine a standard time for each specific operation. So this study provides reliable information about labour time needed to perform each specific operation.

Standard Costs: Standard cost accounting system also provides information on direct labour have requirements per unit of production.

Direct Estimate by Supervisor: Some production supervisors estimate. Standard direct labour hour base on their judgment, recent past performance of the department, assistance from the next level of management and technical staff personnel.

Statistical Estimates by a Staff Group: In this approaches historical cost records are used to obtain useful information for converting production requirements to direct labour hour. It is used by producing department. The historical ratio of direct labour hours to some measure of physical output is computed and then adjusted for planned changes in the responsibility center (Goet, et al., 2063: 6-6.3).

2.1.7.5 Expenses Plan or Overhead Budget

Planning and control of expenses are necessary to maintain reasonable expenses level to support the objectives and planned program of the enterprise. It should not focus on reducing expenses but rather on better utilization of limited resources. So, it should focus on the relationship between expenditures and benefits derived from those expenditures. The two terms cost and expenses are often used in the same sense. But for financial accounting purposes, cost is defined as an expenditure that entirely recorded as an assets and becomes expenditure when it is used up in the future. So on for management accounting purposes, these terms are however, not rigidly defined. They are used interchangeably.

All costs do not show the same behaviour throughout the operation. There exists a relationship between costs and volume of activity.

Variable Cost

Variable costs are the costs that tend to vary in direct proportion and same direction to changes in production activity, sales activity or some other measures of volume of cost driver. So, we conclude that

- Total variable costs are proportionately related to operating activity levels.
- Variable cost per unit remains constant.
- Variable costs can be regulated and controlled in the same responsibility center and in the short run as well.
- Cost that changes proportionately in total but remains fixed per unit is variable.

Fixed Cost

Fixed costs remain constant whether activity increase or decrease or it is subject to change over a period of time. They key features of fixed costs are as follows:

- Total fixed cost are constant.
- Fixed costs per unit are variable.
- Fixed costs are either capacity cost or the time costs or the committed costs.
- Fixed costs are regulated and controlled in a short-term period and by the lower level responsibility center.

Semi-variable Costs

Semi-variable costs are also known as mixed costs as they consist both of fixed costs and variable costs. The first part will not be affected by the changes in the volume/activity. But the later part will be affected by the change in activity.

Cost Reduction and Cost Control

Cost reduction programs are directed towards specific efforts to reduce cost by improving methods, work arrangements and products.

Cost control, in a narrow sense, may be through of as to attain cost goals within a particular operational unit. In a broad sense, cost control includes cost reduction. Programme (without reducing the utility). To exercise control so that desired benefits (i.e. cost goals) could be obtained from the given level of expenses.

Three broad categories of expenses are included in the overhead.

A. Manufacturing Overhead:

It is a part of total production cost. It consists of indirect material, indirect labour and all the miscellaneous factory expenses such as taxes, insurance, depreciation, repair etc. Following steps should be taken for developing the manufacturing overhead budget.

- Select the appropriate activity base.
- Compute total volume of work/activity for each department.
- Compute overhead rate for each production department.
- Computer overhead cost per unit for each product.
- Compute the cost of goods manufactured.

B. Selling and Distribution Expenses Budget:

This includes all cost relating to selling distribution and delivery of product to customers. It's main aspects are:

Planning and Co-ordination: Marketing executive are directly responsible for planning the optimum economic balance between sales budget, advertising budget and distribution expenses budget. PPC views them as three separate problems.

Control of Distribution Cost: Distribution include head office expenses and field expenses for the planning and control point of view, these expenses must be planned by responsibility center. These expenses are not product costs. They are not allocated to special products. So, separate distribution expenses plan should be developed for each responsibility center.

C. Administrative Expenses Budget

Expenses other than manufacturing and distribution expenses are administrating expenses. These cost are incurred in the responsibility centers that provide supervision of and service to all functions of the enterprise. They include large portions of fixed costs than variable cost (Goet et al., 2004: 7-7.8).

2.1.7.6 Flexible Expenses Budget

Flexible budget is prepared at different level of activities. It will furnish the budgeted figures for any level of activity which a company may actually attain. It reflects costs revenues and profit at the various level of budgeted activity. It is prepared on the basis of time, demand of product, cost of product, availability of demand of product, season and availability of factor of production.

A flexible budget can be used comfortable to reduce the margin of deviation between estimation and actual performance. It is used as a yardstick to measure the efficiency at the level of performance achieved and tool for controlling the cost.

In this way it is differ from the static budget. It will be very useful when the all factors of market are not static or they are dynamics. So on it is very importance tool for decision making on uncertain environment.

Preparation of Flexible Budget

We can develop the flexible budget with two methods.

1. Tabular Method: Here, the budget prepared at different level of activities within the range of output. The factors to be taken into consideration for preparing the flexible budget under this method are follows:

(a) Determination of Level of Activity

The activity levels are determined on the basis of units of output or machine hours, labour hours used in production process.

(b) Estimation of Cost and its behaviour for each level of activity:

The costs and estimated for each element of cost together with the cost center at the level of output determined. The organization should determine cost behaviour, fixed variable and semi-variable (About this I already explained in overhead budget part).

(c) Determination of units at the level of activities:

The unit of output to be produced at different level of activities are determined for estimating the budget.

(d) Prepare of flexible budget:

In this stage the flexible budget should prepare at different level of activities whose example is given in the Table 2.

Table 2

Flexible Budget Format

Level of Activities	…….%	…….%	…….%
Sales units/output units	×××	×××	×××
Sales revenue Rs. (unit × price)	×××	×××	×××
Total variable cost (A)	×××	×××	×××
Total fixed cost (B)	×××	×××	×××
Total semi-variable cost (C)	×××	×××	×××
Total Cost (A+B+C)	×××	×××	×××
Profit (loss) = total Revenue – Total cost	×××	×××	×××

2. Formula Format: This format provides a formula for such expenses account in each responsibility centre the formula gives the fixed amount and variable rate. This is more compact and generally more useful because the components of each expense are given. The formula format uses straight line relationships. It is a widely used for expressing expenses budget in actual practice. The formula format is shown below.

Table 3

Flexible Budget

Under Formula Format y = a + bx

Expenses	Cost Behaviour	Fixed cost	Variable cost
Different Cost Items	-	×××	×××
Total	-	×××	×××

(Fago, et al., 2004: 7-7.4)

2.1.7.7 Capital Expenditure Plan or Budget

Capital budgeting is a investment decision regarding long term assets for increasing the revenue of the organization. It is the process of investment, evaluating, planning and financing major investment project of an organization. So it is an evaluation system of capital expenditure decision which involve current outlays but are likely to produce benefits over a period of time longer than one year.

There are some steps which are involved in capital budgeting decision.

Step – 1: Calculation of Net Cash Outlay (NCO)

First we should calculate the total cash outflow at current (zero) period. It involve purchase price, transportation and installation cost, working capital increase etc.

Step – 2: Calculation of Cashflow After Tax (CFAT)

In this step we should calculate annual cash flow after tax or total cash receipt amount of the period which is calculated as by Total Revenue – Operating expenses – Depreciation – Tax + Dep.

Step – 3: Calculation of Final year CFAT

In final year additional amount may receipt because of the scrap value and working capital. So final year CFAT = Regular CFAT + Net Scrap value $\pm$ working capital.

After these step (identifying net cash outflow at present and annual Inflow in future) we should evaluate the project, that is profitable or not. For evaluation, we should use different methods which are below.

Traditional Method

(a) Payback Period: It is that period or year required in which total cash outflow will covered by inflow. So having shorter payback period project is preferable.

(b) Accounting rate of return: Accounting rate of return indicates the profitability of the projects instead of net cash flows. It considers profitability rather than liquidity. Under this method project with higher ARR is prefer then lower. ARR is calculated by Averaging of Net income dividing average investment.

$$\text{ARR X} \frac{\text{Average net income}}{\text{Average investment}}$$

Discounted Cash Flow Method

Traditional methods do not consider the time value of money so this method have developed. This method considers the time value of money. Before evaluation any project under this method the future cash flow must be converted into present value. The following methods are used to evaluate the projects.

(a) Net Present Value

The net present value is the net benefit at present value of an investment. It is the net differences between present value of cash outflow and present value of an investment. It is the net differences between present value of cash outflow and present value of cash inflow. It can be presented in the following equation.

Net present value = Total present value – Net cash outlay.

(b) Profitability Index

It is similar to net present value approach. It measures present value of return per rupee invested while the NPV shows the Present Value of Return in lump sum. A ratio of total present value of cash inflow and initial cost outlay is called profitability index.

$$\text{Profitability index} = \frac{\text{Total Present Value}}{\text{Net Cash Outlay}}$$

(c) Internal Rate of Rate (IRR)

It is a discount rate which the net present value of investment will be zero. It is the rate that discounts an investment’s future cash flow to the present so that the present value of those cash flow exactly equal the cost of investment. It is presented as follows

$$\text{NCO} = \frac{\text{CFAT}}{(1+\text{IRR})^n}$$

Project having IRR more than interest rate is preferable. (Fago, et al., 2004: 12-12.12)

2.1.7.8 Cash Budget

Cash budget is the very important tool of profit planning and control or cash management. It is an integral part of cash planning. It is a plan of future cash receipt and payment. The statement showing the estimated cash income (cash inflow) and cash expenditure (outflow) over a projected time period is known as cash budget. The forecast of cashflows are made on the basis of past behaviour of cash flows as modified and adjusted to likely changes during the coming period. It is one of the major responsibility of management to plan, control and safe guard the cash of enterprises. An annual profit plan, short term cash plan is also to be includes. Basically cash budget includes two parts:

(a) The planned cash received (inflows) and
(b) The planned cash disbursement (outflows)

Planning of cash inflow and outflow gives the planned beginning and ending cash positions for the budget period. It will indicate

- Need for financing probable cash deficit.
- Need for investment planning to put excess cash to profitable use - cash budget is prepared after preparing excess sales, production, material, labour, overhead, selling and distribution expenses budget. Generally it is prepared monthly.

There are several objectives of cash budget which are follows:

- Give the probable cash position at the end of each period as a result of planned operations.
- Identify cash excess or shortages by time periods.
- Establish the need for financing and on the availability of idle cash for investment.
- Coordinate cash with (a) Total working capital, (b) sales revenue, (c) expenses, (d) investment, and (e) liability.
- Establish some basis for continuous monitoring of the cash position.
- Indicate the availability of cash discount.
- Preserve liquidity.

Following is the format of cash budget.

Table 4

…………….. company

Cash budget, by month

For the year

Items	Jan (Rs.)	Feb (Rs.)	March (Rs.)
Opening balance	×××	×××	×××
Add: Cash receipt			
Cash sales	×××	×××	×××
Collection from customers	×××	×××	×××
Other's receipts	×××	×××	×××
Total Cash receipt (A)	×××	×××	×××
Cash payment			
Purchases	×××	×××	×××
Wages	×××	×××	×××
Other expenses payment	×××	×××	×××
Capital expenses	×××	×××	×××
Total Payment (B)	×××	×××	×××
Surplus (deficit) (A-B)	×××	×××	×××
Borrowing	×××	×××	×××
Repayment	×××	×××	×××
Interest payment	×××	×××	×××
Closing cash balance	×××	×××	×××

*Closing balance of month is opening balance of next month.

(Bhattarai, 2061: 5.42)

2.1.8 Completion and Implementation of Profit Planning and Control

2.1.8.1 Completion of the Annual Profit Plan

The development of an annual profit ends with the planned income statement, the balance sheet and the planned statement of changes in financial position. These three statements summaries and integrate the details of plans developed by management for the period. They also repost the primary impacts of the detailed plans developed by management for the period. They also report the primary impacts of the detailed plans on the financial characteristics of the firm. Before redistributing the completed profit plan, is generally desirable to recast certain budget schedules so that technical accounting mechanics and Jargon are avoids as much as possible. The redesigned budget schedules should be assembled in one logical order, reproduced and distributed before the first day of the up-coming budget period. The profit plan completion date is important. Issuance of a profit after the beginning of the budget period is one sure way of destroying much of tic budget potential. Timely copulation to the planning budget suggests the needs for a nudged manner.

2.1.8.2 Implementing the profit plan

The final test of whether the effort and cost in developing a profit plan are worthwhile is its usefulness to management. The plan should be developed with the conviction that the enterprises in going to exceed all major objectives. Participations enhance communication. If this principle is to be effective the curious executives and supervisors should have a clear understand of their responsibilities. The copied of the complete profit plan should be prepared and distributed to the members of executive management. Normally, distribution of the completed plan should be limit to vice presidents and to the heads of the certain staff groups. The guiding principle in establishing the distribution policy might be expressed to provide one copy to each member of the management term according to his or her overall responsibilities, taking into account the problem of security. The distribution policy should allow distribution of pars, or segments, 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 his particular responsibility, such as the sales budget, and advertising budget for his district, after distribution of the profit, plan, a series of profit plan conferences should be held. The top executive discusses comprehensively the plans, expectation and steps in implementation. At this top-level meeting the importance of action flexibility and continuous control may well be emphasized. In particular, it must be realized by each manager, that the budget is a tool for their use. The profit plan, no matter how well designed and how well carefully drawn cannot manage, in the final analysis people, not budgets perform the management functions use of a profit plan as a guide to action and performance, directed toward attaining or bettering the goals qualified in the annual profit plan required continuous management effort and attention.

Similar conference should be conducted until all levels of management are reached. Each executive and supervisor must clearly understand his particular responsibilities. This conference should and, if conducted properly, will tend to ensure action support for the objectives. Basically, this is a phase of communication from the top down a generally neglected phase in management.

The profit plan provides the managers of each responsibility center an approved operating plan for his center, thus the planning budget becomes the basis for current operation and exert considerable coordinating and controlling effects.

Performance must be measured and reported to management. Execution of the plan is assured through control. Procedures must be established so that accomplishment, or failure, is immediately known. On this basis action can be taken to correct or minimize any undesirable effects. Short-term performance reposting is essential.

The flexibility of the key aspect of the budget implementation. To view the profit plan as an inflexible blueprint of operations is to invite trouble. Obviously, it is impossible during the planning phase to anticipate all contingencies each day may present contingencies not anticipate in the plans. Therefore, current adjustments must be made in operating plans despite the ordinary budget. The budget should not be viewed as restrictive influence but rather as a specification of the goals of the entity. Certainly every advantage should be taken as it arises despite its not having been anticipated in the budget. Taking advantage of favorable opportunities as they arise is primary responsibility of the management.

2.1.9 Performance Report

The performance report is an effective controlling tool for profit planning and control. The performance reporting phase of comprehensive profit planning and control program significantly influences the extent to which the organization's plan, goals and objectives.

To indicate the extensive reporting requirements a business must fulfill and to focus on performance reporting the following broad classification of reports is presented and briefly explained.

External Reporting

These are reports to government agencies, regulatory commissions, creditors, investigative agencies and other groups external to the active management, frequently, these reports are quite extensive and comprise a significant portion of the overall reporting activities of the business.

Report to Owners

These are reports prepared with in the company for internal use only. They may be considered confidential reports, they do not have to meet the needs of external groups nor the text of generally accepted according but rather the text of internal management needs.

All companies regardless of size have reporting requirements for all the categories listed above. In the smaller company most of the basic reporting needs may be accomplished with a single general purpose report. However, as the size and complexity of the company increases, there is greater need for regimentation of the reporting as suggested above.

Essential Features of Performance Reports

Performance reports should be:

(a) Tailored to the organization structured and controllability.

(b) Designed to implement the exception principle in management.

(c) Repetitive and relate to short time spans.

(d) Adapted to the requirement of the principle use.

(e) Simple, understandable and report only essential information.

(f) Accurate and expressive of significant distinctions.

(g) Prepared and presented promptly.

(h) Constructive in tone.

The extent to which the various managers utilize their performance reports depends upon many factors, some behavioural and some technical. One important factor is to extent to which the performance reports serve the evaluation and decision-making needs of the user. Communication is a subtle problem, if the different needs and experiences of the user are taken into account. A foreman responds differently than a vice president.

Top management must have reports that give a complete and readily comprehensible summary of the overall aspects of operations and an identification of major events. The summaries must be supported by sufficient detail to facilitate tracing unfavourable situations to their source.

Middle management is usually defined as those members of the major sub-division of the business, such as sales, production and finance; middle management is responsible for carrying out the responsibilities assigned to be sub-divisions with in the broad policies and objectives established by top management. Performance reports for middle management, although including summary data, also are characterized by detailed data on day-to-day operations.

Lower level management is principle concerned with coordination and control of day-to-day operation, therefore, control reports must be designed accordingly. These reports are principally concerned with production and cost control. Reports to foremen and supervisors must be detailed, simple, understandable, and limited to items having a direct bearing on the supervisor's operational responsibilities.

2.1.10 Analysis of Budget Variance

Comparison of actual performance and planned performance has been emphasized as an integral part of the control process. A basic features of performance reports is the reporting of variances between actual results and planned or budget goals. If a variance is significant, a careful management study should be made to determine the underlying causes. The underlying causes, rather that the actual results, should lead to remedies through appropriate corrective action by management. There are numerous ways to study or investing variances to determine the underlying causes. Some of the primary approaches are the following.

(a) Conference with responsibility centre managers and supervisors and other employees in the particular responsibility centre involved.
(b) Analysis of the work situation including the flow of work, coordination of activities, effectiveness of supervision and other prevailing circumstances.
(c) Direct observation.
(d) On the spot investigations by line managers.
(e) Special studies.
(f) Investigations by staff groups.
(g) Variance analysis

Variance analysis involves a mathematical analysis of two sets of data in order to gain insight into the underlying causes of a variance. One amount is treated as the base, standard or reference point. Variance analysis has wide application in financial reporting. Variance are analyzed in the following areas:

(a) Raw materials variances
(b) Labour variances
(c) Overhead variances
(d) Sales variances
(e) Profit variances

Variance is the deviation between actual and budgeted or standard results. Following are the basic steps in analyzing variances:

(a) Setting standards
(b) Measurement of actual performance.
(c) Analyzing variances.
(d) Taking corrective action or feedback.

Variance should be broadly grouped under two categories; favourable and unfavourable variances, further should be classified as controllable and non-controllable. If unfavourable variance are arise due to controllable causes, then related centre or management should be accounted for responsibility.

2.2 Review of Previous Related Studies

During the research work the previous study about it is the very importance because they provide bases for the present study. In other words, there has to be continuity in research. This continuity in research is ensured by linking the present study with the past research studies. Literature review is basically a stock taking of available literature in the field of research.

The main purpose of literature review is to find out what studies have been done in the field of study and what remains to be done. It provides the foundation for developing a comprehensive theoretical framework and minimize the risk of pursuing the dead-ends in research. Thus different books, reports and journals research studies published by DDC and dissertations submitted by master level students in the topic of profit planning have been reviewed.

Bhattarai has conducted a research about "Sales and Production Planning in DDC" in his research. He has tried to point out some feature and problem of profit planning in Nepalese manufacturing public enterprises. For this study one enterprises has been selected for study of "Daily Development Corporation". He has discussed some features and problem of profit planning.

The main objectives of this research work are

(a) To analyze the sales and production planning adopted in those DDC.
(b) To examine the capacity utilization of DDC.
(c) To assess the financial performance of DDC working BEP analysis.
(d) To provide some useful recommendation.

Major Findings

(a) DDC has practiced short term planning rather then long term planning.
(b) The corporation has no proper practice of segregating cost into fixed and variable.
(c) There is not separate planning development and expert planner is prepared on tradition and adhoc basis.
(d) No proper management to supply milk in the urban areas because of the difficult in collecting surplus milk in rural market.
(e) Financial position of the DDC has not good.
(f) DDC has problem of maintaining the quality of the products.

Recommendations

1. DDC should develop its specific goal for coming budget. Such goal may be not profit on sales, net profit on capital employed.
2. DDC should from long term planning on specific and practicable basis.
3. At decision making level, competent and capable persons should be involved for this political interference should be avoided.
4. The storing system of milk should be made more effective.
5. There should be good transportation system for collection rural milks.

(Bhattarai, 2004)

Gyawali has studied about “Profit and Sales Plan and their achievement in DDC with special reference to milk production.” The main objectives of this study were achievement of sales and production budget of milk, analyze material and labour budget and variance between targets and actual achievement of DDC.

Major Findings

(a) Not preparation of strategic (long range) profit plan, not clear objectives, lack of budgeting experts, planners, no effective program to attain goal.

(b) Sales budget are not prepare, profit pattern is poor, faculty financial and investment decision, improper management, unscientific milk collection and distribution policy etc. so on low utilization of capacity.

Recommendations

(a) Formulate strategic plan and programme, prepare of different budget.

(b) Optimum capacity utilization, proper management system and policies, establish separate costing selection etc.

(Gyawali, 1997)

Thapa has studied about "Profit planning in manufacturing enterprises in Nepal (A Comparative Study in Daily Development Corporation and Sitaram Daily Industry). The main objectives of this study were to analysis to functional budgets on sales and production sector of the concern, to analyze various accounting ratios to measure the profitability and efficiency of concern, to study of present process to find its usefulness and limitation and to analyze of budget target and its achievement along with reason of deviation if any etc.

Major Findings

(a) DDC has concentrates its whole effort to the survival of the company and SRD has been trying to minimize the loss. Both industries have no in depth analysis of company's strength and weakness.

(b) Employees are more careful of their duties and responsibility in SRD than DDC. No fair system of reward and punishment to them on the basis of their performance is maintained in both industries.

(c) SRD's capacity utilization is proper than DDC's capability utilization.

(d) Both companies are positive correlation between target and actual sales.

(e) Both companies have not proposed profit planning except sales and production plan.

Recommendation

1. Long-term objectives should be clearly formulated so as to make a clear distinction between profit motive and social motive and entrepreneurship is the firms requirement for any business success.
2. HMG, Intervention should not be made full for function aspect of enterprise management should be given full authority, responsibility and accountability for routine and major operation.
3. These companies are facing the problem of under capitalization by which production is affected. So, to enhance the production capacity the necessary financial arrangement should be over viewed.
4. Periodic review of financial health of the corporation should be made by using financial analysis tools and techniques like ratio analysis, fund flow analysis, trend analysis etc. This helps the top management to evaluate the effects of its financial policies/strategies and to take necessary steps to avoid risk on time.

(Thapa, 1999)

Acharya has studied about "Financial Analysis of Dairy Development Corporation". The main objectives of this study were to analyze the financial performance of DDC and efficiency measurement.

Major Findings

1. Lack of coordination and realization of objectives between different levels of managers.
2. The corporation is not able to use its funds properly for generating adequate sales and profit.

3. The sources and uses of funds of corporation are not in a particular trend. The major sources of fund are foreign aid and miscellaneous income.

Recommendation

1. Collected capital from short-term loan and not to invest capital in low income generating current assets.
2. Plan layout, evaluate performance and condition of present equipment for replacement.
3. To give a high autonomy in fixing selling price from the side of the government.

(Acharya, 2003)

Dahal have studied about “A study on demand and supply situation of Dairy products in Kathmandu with reference to Dairy Development Corporation”. The main objectives of this study were now DDC has available the necessaries dairy product for Kathmandu resident.

Major Findings

1. The major problem faced by the corporation is lack of the sufficient raw material.
2. The farmers and booth centers are attracted toward private sector due to the high price and commission being altered by the private dairy firm.
3. It is also assumed that supply and sales may be decreased due to the emergence of private sectors.

Recommendation

1. A few animals must be purchased and provided to farmers because at present most of the animals are poor in production and veterinary services should be enlarged in order to increase the productivity of animals.

2. DDC must attract the farmers by giving production price incentives. In this situation, farmers should be paid more money per unit of milk or fat so it could complete with daily enterprises in private sector.
3. The commission paid per packet to booth centers by corporation should be increased. At present, it is found that private sector pays more commission per packet of milk or booth centres. This has influenced them to sale more private dairy products.
4. At present, some of dairy firms supply their products without standard. DDC can contribute through the measures such as advertising marketing people conscious about their health, awareness of unhygienic milk. These can promote the sales of DDC.

(Dahal, 2002)

Subedi has studied about "A study on milk collection and distribution by DDC in Kathamndu". The main objectives of this study were how the DDC is efficience for collection the rural milk and distribution its product in urban market (Kathmandu).

Major Findings

1. Lack of training in dairy technology and dairy business management and quality maintenance.
2. The overall very poor sales and distribution system, especially as regards other milk products, is an important problem to the development of dairy industry.
3. No timely revision of milk price by DDC.
4. DDC has consistently carried excess staff mainly due to political pressure on management.
5. There is lack of marketing information system on DDC.
6. Lack of understanding between dairy entrepreneurs and dairy farming.

Recommendations

1. Training of daily technology, dairy business management and quality maintenance should be provided.

2. Point of sales promotional materials should be displayed at either booths, dealers or shops of DDC.
3. Clear government policy regarding dairy farming should be formulated.

(Subedi, 2004)

The Research Gap

In this way there are more studies done by previous researcher about DDC, whose has separate objectives, findings and recommendation. But they are not sufficient for how to implement these recommendations. So on how to improve the management system of DDC. But the researcher has tried to give the optimal solution to implement the recommendation and improve the management system of DDC.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 General Introduction

Research methodology is the way to solve systematically about research problem. "Research methodology refers to the various sequential steps to adopt by a research in studying a problem with certain objective in view" (Kothari, 2000: 39). In other words, research methodology describes the method and the process applied in the entire aspect of the study. It helps to analyze, examine and interpret various aspect of research work such as sales and production planning and other aspects related to profit planning in the research work. In accordance with the basic objectives and other sub- objectives are also formulated and research methodology is followed to achieve the objectives of the research paper. The major contents of research methodology followed in the study are as below.

3.2 Research Design

"A Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure" (Kothari, 2000: 39). In other words make any type of research a well-set research design is necessary, which fulfils the objective of the study. Generally research design means definition procedure and technique, which guide to study and propounds way for research through analysis of data. This study is an examination and evaluation of budgeting procedures in the process of profit planning of DDC. So analytical as well as descriptive approach has been adopted to present the data.

This study is closely related with various functional budgets and their actual performance as well as other accounting statements. The available information from primary and secondary sources is used to examine, explain and evaluate the profit planning system of Dairy Development Corporation.

3.3 Period Covered

There are two types of times dimensions in profit planning i.e. long range and short range. For short range planning, it has analyzed one year's period activities of DDC. Long range trends are taken from fiscal year 2056/57 to 2062/63.

3.4 Nature and Sources of Data

Actual data or information is very importance of any research work. To fulfill the objectives of this study, the researcher has been used primary as well as secondary data. Primary data are collected through interview with the officials and as well developed some supplementary questionnaire.

Secondary data has been collection from the different reports and published documents of DDC, magazine, publication of the National planning commission, statistical survey, unpublished dissertations and the official accounting and planning records of DDC. The questionnaires will be shown in the appendix at the end of this study, which is used for collecting information about DDC.

3.5 Research Variables

The research variable of this study is mainly related with the accounting statement of DDC. Sales, production, inventory, purchases, profit and loss statement, balance sheet, capital utilization, capital expenditure and cash flow related to long- term and short-term period of DDC are the main research variables of this study.

3.6 Statistical Tools Used

The research variables of the study are mainly related with the accounting statement of DDC. Sales and production are the main variable of this study and other variable are also used where as necessary. Data collected from various sources are managed, analyzed and presented in proper tables and formats.

Interpretations and explanations are made wherever necessary. To analyze the collected data financial and statistical tools are used. Financial tools mainly used are cost-volume-profit analysis, ratio analysis and flexible budget. Similarly the statistical tools are used mean, correlation, regression, coefficient of variance, standard deviation, percentage graphs and diagrams.

Some Formulas

i. Arithmetic Mean $(\bar{X}) = \frac{X}{N}$

ii. Standard Deviation $(SD_x) = \sqrt{\frac{(X - \bar{X})^2}{N}}$

iii. Correlation of Coefficient $(r) = \frac{xy}{\sqrt{(x^2)(y^2)}}$

iv. Coefficient of Variation $(C.V.) = \frac{SD_x}{\bar{X}}$

v. Regression Equation $y = a + bx$

3.7 Research Procedures

For a successful research work, several procedures should follow systematically. In this research work the researcher has been followed different procedures systematically which are follows:

1. Collection of various books and other publications relevant about study.
2. Assimilation of useful secondary data.
3. Description and analysis of collected data in light of theoretical basis.
4. Tabulation and presentation of data through table charts and graphs.
5. Analysis of data by using approved statistical and financial tools.
6. Findings the valuable conclusion and recommendation.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

For implementation of effective management performance the profit planning is a importance tool. So, it is a primary measure of business success for any enterprises. The main purpose of profit planning in any business is to increase the chances of making profit. Budgeting or comprehensive profit planning and control continues to be of prime importance in the organization. Planning involves the control and manipulation of relevant components. Controllable and non-controllable and reduced the impact of uncertainty so that the enterprise could be saved from the chance of making losing. So, it increases the profit at short term and long term.

Profit planning and control have wide application in any individual business, governmental unit and any types of business enterprises. It should be regarded not as a master plan but as some time it becomes secondary. Therefore, profit planning is viewed as a process designed to help management effectively perform significant phase of the planning function. In other word, business planning, management planning and profit planning are interrelated to each other or they are supplement of effective planning profess of organization.

The main purpose of this study is to analyze the sales and production planning (a tool of profit planning and control) of DDC. To gain this purpose in this chapter I will analyze the various aspects of profit planning and their actual achievement. Profit planning is a managerial tool, which is applied in every business either manufacturing or trading enterprises. So, profit planning is the formal expression of the enterprises plan, goals and objectives stated in financial terms for specific future period of time. Moreover various strategies, policies, plan and programmes are applied by management for achieving prescribed objectives at a competitive environment.

Profit planning is a managerial techniques and a profit plan is a written plan, in which all aspects of business operation with respect of business operations with respect of definite future period are included. It is a formal statement of policy, plan objective and goal established by the top management in respect of some future period. Profit planning is predetermined detailed plan of action developed and distributed as a guide to current operations and as a partial basis for the subsequent evaluation of performance. So, we can say that profit planning is a tool which may be used by management in planning the future course of actions and the controlling the actual performance.

Budgeting or profit planning is a numerical plan of action, which generally cover the area of revenue and expenditure or production and sales. The profit is the major element of each and every business for it's survival, further development and fulfilling social expectation. In modern business effectiveness and efficiency of business organization or management are measured from earning power of profit. Generally they are two types of profit plan are formulated. One is long term profit plan and another is short term profit plan. In this study doesn't deserve the quality to analyze it in detail because of time and resource constraint. Therefore, the study is mainly focused in tactical short term profit plan of DDC. So, the sales, production and other related figures of previous year are also presented and analyzed to know the overall economic and financial trend and to estimate the possible future trend of DDC. For this purpose I study the seven years data from fiscal year 2056/57 to 2062/63 B.S.

The short-range profit plan is analyzed by taking relevant figures from various functional budgets on each fiscal year. Figures of one fiscal year may represent the techniques, process and other procedures of preparing budget, their use for the purpose of profit planning, comparison with actual achievement and analysis of variances for the years because such processes are same for every year and repeated each year in the time of preparing and analyzing budget. For this fiscal year 2062/63 has been takes as representative year to analyze the short-term profit plan. Various functional budget of fiscal year 2062/63 and their basis of preparation, actual achievement and related variances between budget target and actual are analyzed in detail. Attempt is made to point out the reason behind the deviation between budget and actual. Some recommendations have been made after analyzing this study.

4.2 Defining the Objectives and Goals as Basic Elements of Profit Planning in DDC

SMART objectives and goal is very important for operating any enterprises.

S = Suitable
M = Measurable
A = Applied
R = Reasonable
T = Timely

The objectives are those ends which organizations seek to achieve through its existence and operations. Every enterprise is established to attain described level of objectives. So, enterprises must be necessary to know the objectives in broad terms. In present context, reasonable profit approach has been becoming at a strong position. In other word, for survival growth and maintaining social expectations reasonable profit must be earned or reasonable profit is basic element of profit planning.

The organization’s objectives and goal must have the SMART feature. Management of business organization must be necessary to know the objectives in broad term because management co-ordinate all resources of organization (i.e. human resources, financing resources, natural resources etc.). So clear goals and objectives help to organization to be successfully operation out more challenging and competitive environment.

It is said that the enterprises of Nepalese are not developed. They are unsystematic or management systems of Nepalese enterprises is very poor. Goals and objectives are identified in planning but not adequate for the development of enterprises. Many managers have not adequate knowledge of the enterprises situations, goals and objectives. In this case, effective planning to achieve the goals and objectives cannot be formulated. Without implementation of planning there is no fulfillment of objectives and goals. So, fulfillment of objectives and goals of DDC (which I have given in first chapter) effective planning is very necessary, which includes sales planning, production planning, inventory planning, manpower planning, cost value profit, capacity utilization flexible budgeting planning etc, which is defining clearly below.

4.3 Sales Planning or Sales Budget

Sales planning or budgeting is the basic functions of all other profit planning. It provides basic management decision about marketing or market situation. Sales are primary sources of cash inflow and all other functional budget or planning, which are prepared on the basis of sales plan. It is directly related with all business activities. So, sales plan should be realistic and proper.

Sales planning are prepared on the basis of sales forecasting which depend on different factors of market situation. The preparation of sales plan involves the different steps, which are as follows:

i. The marketing plan
ii. The advertising and promoting plan
iii. The selling expenses budget

Sales budget is prepared by product, by periods and by sales territory. The overall responsibility of preparing sales budget is upon the sales manager although chief executive should also be involved in such activities. Generally, a comprehensive sales plan includes both strategic and tactical sales plan.

DDC has only short-range sales plan for the coming fiscal year. Sales budget is prepared by product, by region and by time. DDC has produces different products that can be measure in liter and kg. For example the production of milk, yoghurt and ice cream can measure in litre and other product can measure in kgs. DDC has supplied its production from 8 sales centers and 1828 booths.

The following Table 5 and 6 show the budgeted and actual sales of different products of DDC in quantity.

Table 5

Dairy Development Corporation

Budgeted and Actual Sales (Milk, Yoghurt and ice cream)

(Units in 000 ltrs)

Fiscal Year	Budgeted (X)	Actual (Y)	Achievement (%)
2060/61	60329.90	55307.59	93.68
2061/62	60762.60	56568.28	93.10
2062/63	60730.00	57377.86	94.48
2063/64	64498.47	57723.80	89.50
2064/65	65207.00	62973.00	96.57
2065/66	61918.15	57419.00	92.85
2066/67	62689.71	59317.00	94.62
Total	436135.83	406758.53	93.26

Source: DDC Annual Reports.

The above table shows that the actual sales are below then the budgeted sales on all period. The achievement is lowest on FY 2063/64 and highest is on FY 2064/65. The gap between budgeted and actual sales is not more than 7%. The presentation of above figure will be more clear and effective by following graph.

Graph 1

Dairy Development Corporation

Budgeted and Actual Sales

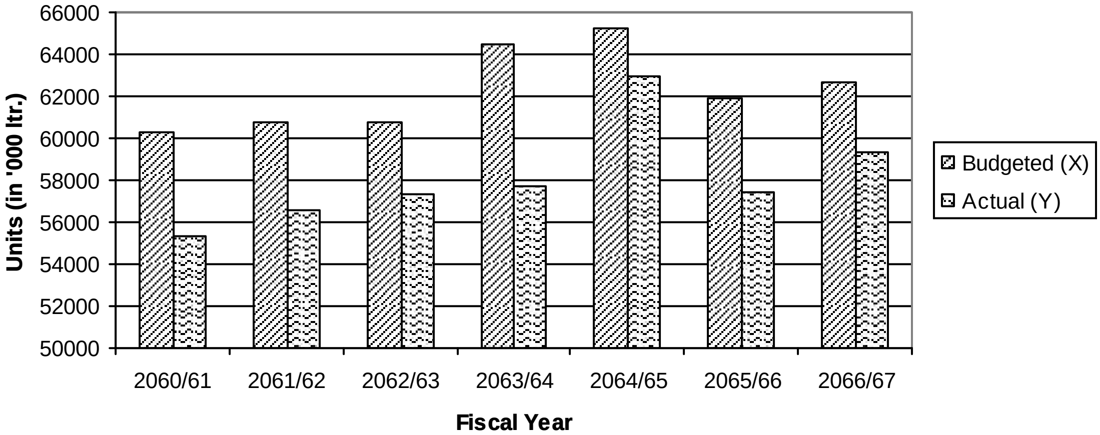


Table 6

Dairy Development Corporation

Budgeted and Actual Sales (Butter, ghee, Cheese, Paneer)

(Units in 000 kg)

Fiscal Year	Budgeted (X)	Actual (Y)	Achievement (%)
2060/61	1429.90	1438.51	100.60
2061/62	1386.14	953.90	68.82
2062/63	1360.00	1164.49	85.62
2063/64	1328.22	1517.30	114.24
2064/65	1439.00	1341.00	92.19
2065/66	1540.91	1452.00	94.23
2066/67	1473.46	1431.32	97.23
Total	9957.63	9298.52	93.38

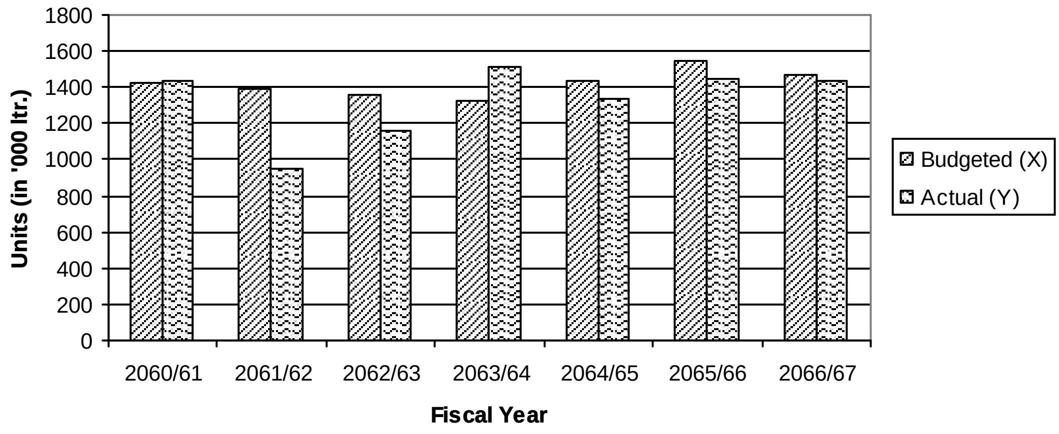
(Source: DDC Annual Report)

The above table shows that most of the actual sales are below than the budgeted (planned) sales except in FY 2060/61 and FY 2063/64. In FY 2063/64, there decreases sales targets and increase all product sales in comparison on last year's trend. The achievement is lowest on FY 2061/62 where actual sales of all products decreased and highest on FY 2063/64. The gap between budgeted and actual sales is 45%. The presentation of figure will be more effective by following graph.

Graph 2

Dairy Development Corporation

Budgeted and Actual Sales



The above table and graph have shown the budgeted sales and actual sales in quantity of the product. So, we can found the generally actual achievement is less than planning in quantity.

Now, I will study the budgeted and actual achievement in amount. So, the following table shows the budgeted (planned) and actual sales in amount.

Table 7

Dairy Development Corporation

Budgeted and Actual Sales (Milk and Milk Products)

(Rs. in Lakh)

Fiscal Year	Budgeted (X)	Actual (Y)	Achievement (%)
2060/61	14980.59	13987.00	93.37
2061/62	15611.35	13621.00	87.31
2062/63	16722.68	15031.00	89.90
2063/64	16405.02	15482.24	94.36
2064/65	16479.83	15959.07	96.84
2065/66	16650.15	15358.10	92.24
2066/67	16981.70	15896.63	93.61
Total	113831.38	105345.04	92.54

Source: DDC Annual Report

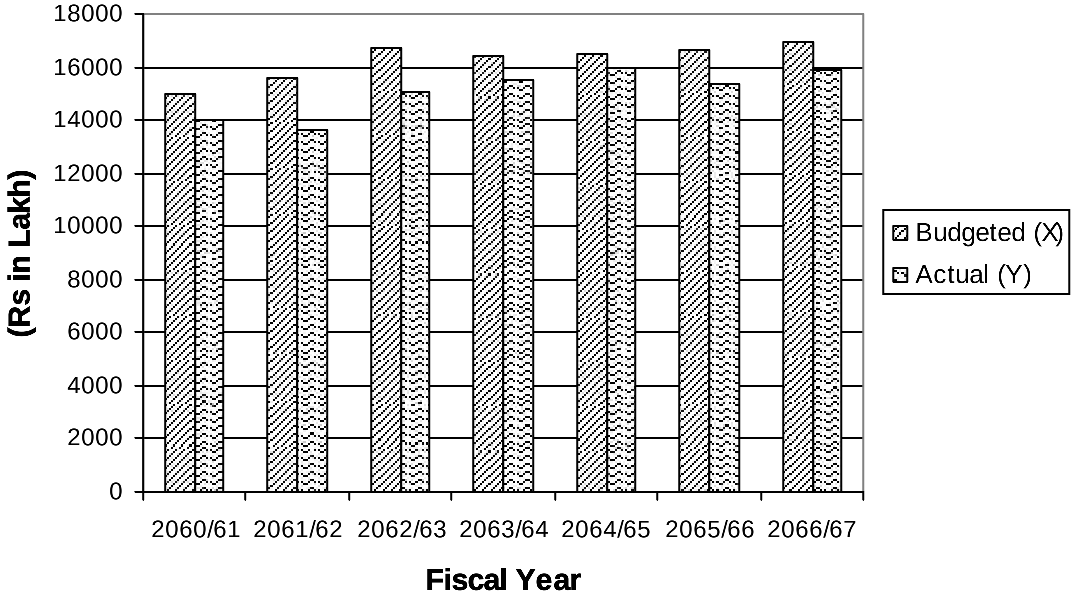
The above table shows that the actual sales are below than the budgeted sales on all fiscal years. The gap between budgeted and actual sales are fluctuated which means the sales target is develop without considering the previous year's sales achievement while preparing the sales budget for coming year. Previous year's sales performance should also be considered in account. But in DDC, the planning is neither made on basis of the past year sales trend nor on research market situation nor demand forecast.

The presentation of the above figure will be more effective by following graphs.

Graph 3

Dairy Development Corporation

Budgeted and Actual Sales



For finding out of the nature of variability, we can calculate different types of statistical tools like mean, standard deviation, coefficient of variation and correlation. The detail calculations of these figures are shown in Appendix-1. That' summarizing result is shown below:

(Rs. in Lakh)

Particulars	Budgeted Sales (X)	Actual Sales (Y)
Mean	16261.63	15049.29
Standard Deviation	656.2	842.52
Coefficient of variation	4.03%	5.60%

From the above calculations, it is clear that actual sales is more variable than budgeted sales or budget sales is more constant or homogeneous than actual sales because C.V. of actual sales is higher than budgeted sales.

"The relationship between two (i.e. dependent and independent) variables are called simple correlation. The most important method of measuring the correlation between the two variables is 'Karl Pearson's Coefficient of

Correlation'. This is the mathematical method of measuring the degree of association between the two variables say X and Y" (Shrestha, et al., 2057: 318). Here a statistical tool correlation of coefficient (r) can be used to analyze the relationship between budgeted sales and actual sales. For this purpose budgeted sales (X) is assume to an independent variable and actual sales (Y) is assumed to be dependent variable. It is assumed that actual sales will increase if budgeted sales is increased vice versa. It means there is positive correlation between budgeted and actual sales.

"The Probable Error (P.E.) of the correlation is applicable for the measurement of reliability of the computed value of the correlation coefficient 'r'.

If r < P.E. the value of 'r' is not significant no matter how high 'r' value is i.e. there is no evidence of correlation between the variables.

If r > P.E. the value of 'r' is significant i.e. there is evidence of correlation between the variables'. (Shrestha, et al., 2057: 325)

The detail calculation of 'r' and P.E. is presented in Appendix-1. Here, we can calculate in summarize from of 'r' and P.E. in following way:

Calculation of Karl Pearson's Correlation coefficient (r) = 0.84

Calculation of Probable Error (P.E.) of Correlation Coefficient (r) = 0.075

This figure of the value of 'r' shows that there is positive correlation between budgeted and actual sales. The actual sales will change in the same direction of the change in budgeted sales. Here, r > P.E. i.e. r (0.84) > P.E. (0.075), so the value of r is definitely significant. So, it can be said that actual sales will go on same direction of budgeted sales.

Some assumption of Karl Pearson's Correlation Coefficient 'r'. the numerical measurement of relationship between the two variables is denoted by the symbol of 'r' whose values ranges from -1 to +1.

If ‘r’ = 0, there is no relationship between the variables.

If ‘r’ < 0, there is negative relationship between the variables.

If ‘r’ > 0, there is positive relationship between the variables.

If ‘r’ = +1, the relationship is perfectly positive.

If ‘r’ = -1, the relationship is perfectly negative.

Source: Shrestha, et al. 2057: 318.

4.4 Production plan or Production Budget

About the production plan, I already discussed in review of literature chapter. It refers the developing of policies about efficient production level, use of production facilities and inventory level. Preparation of production plan is second step in developing profit plan.

Production Unit = Planned Sales + Final Inventory – Initial Inventory

The following table 8 and 9 presents the budgeted production and Actual Production of Previous years.

Table 8

Dairy Development Corporation

Budgeted and Actual Production (Milk, Yoghurt and Ice cream)

(Units in 000 ltrs)

Fiscal Year	Budgeted (X)	Actual (Y)	Achievement (t)
2060/61	74430.00	68832.64	92.48
2061/62	74176.20	71817.64	96.82
2062/63	73431.00	77301.97	105.27
2063/64	77300.97	71034.40	91.89
2064/65	77717.00	73944.00	95.15
2065/66	76929.71	68629.00	89.21
2066/67	71736.44	67174.00	93.64
Total	525721.32	498733.65	94.87

Source: DDC Annual Report

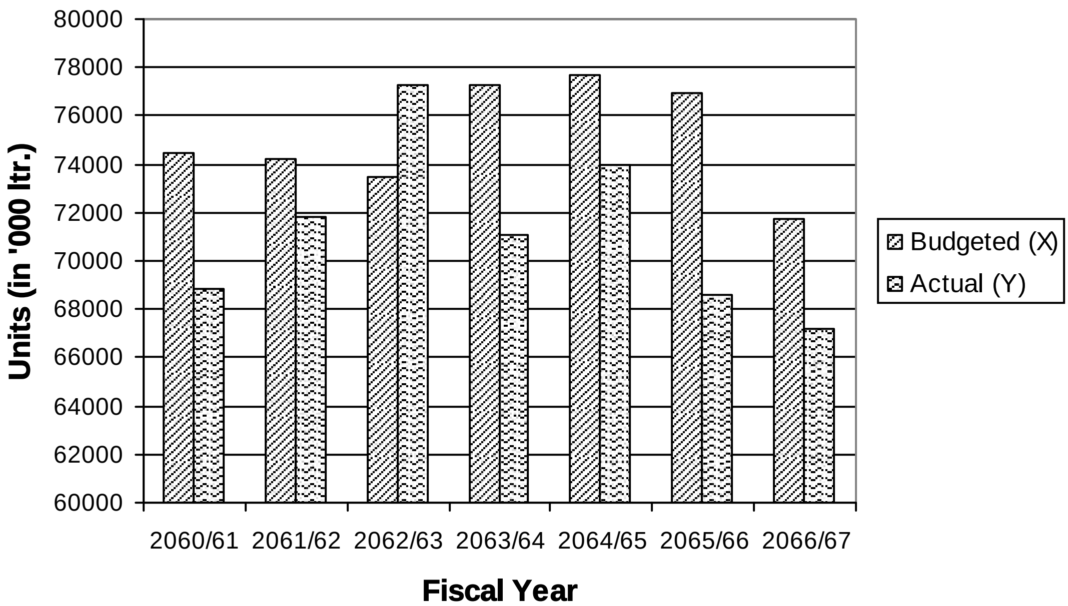
The above table shows that all the actual productions are below than the budgeted production except in FY 2062/63. The gap between budgeted and actual production is not more than 13.38%. The achievement is lowest in FY 2065/66 and highest in FY 2062/63. In FY 2064/65, there is a few decrease in production target but actual production is more decrease in comparison with previous period. In FY 2062/63 there is decreased the production target and increase in actual production in comparison with past year's research period. Similarly, the production is lowest in FY 2065/66 in the quantity production. In FY 2066/67, there is decrease both target and actual result in comparison with last year's target and actual production.

The above figure can present in graph which will be more effective than table.

Graph 4

Dairy Development Corporation

Budgeted and Actual Production



For finding out of the nature of variability, we can calculate different type of statistical tools like mean, standard deviation, coefficient of variance and correlation of coefficient. The calculation of these figures are shown in Appendix-2. The summarizing result of Appendix-2 is below:

(Units in 000 ltrs.)

Particulars	Budgeted Productions	Actual Production
Mean	75103.05	71247.66
Standard Deviation	2085.40	3242.13
Coefficient of variation (C.V.)	2.78%	4.55%

From the above calculation, it is clear that budgeted productions are more constant than actual production and actual productions are more fluctuation than budgeted production because C.V. of Actual production is higher than Budgeted production.

A statistical tool, correlation of coefficient (r) can be used to analyze the relationship between budgeted production and actual production. For this purpose budgeted production (X) are assumed to be independent variable and actual production (Y) are assumed to be dependent variable. It is assumed that actual production will increase if budgeted production is increased or vice versa. It means there is positive correlation between budgeted and actual production.

The Probable Error (P.E.) of the correlation coefficient is applicable for the measurement of reliability of the computed value of the correlation coefficient 'r'.

If r < P.E. the value of 'r' is not significant no matter how high 'r' value is i.e. there is evidence of correlation between the variables.

If r > P.E. the value of 'r' is significant i.e. correlation is significant.

The detail calculation of 'r' and P.E. of 'r' is presented in Appendix-2. Here, we can calculate in summarize from of 'r' and P.E. in following way:

Calculation of Karl Pearson's Correlation Coefficient (r) = 0.137

Calculation of Probable Error (P.E.) of Correlation Coefficient(r) = 0.25

The figure of the value of 'r' shows that there is positive correlation between budgeted and actual production. Here, r < PE i.e. (0.137 < 0.25). So, the value of 'r' is not significant at all. So, it is doubtful that whether actual production will go on same direction of budgeted production.

Table 9

Dairy Development Corporation

Budgeted and actual Production (Butter, Ghee, Cheese, Paneer and Skim Milk Powder)

(Units in 000 kg)

Fiscal Year	Budgeted (X)	Actual (Y)	Achievement (t)
2060/61	3118.20	2861.08	91.75
2061/62	3012.80	2427.27	80.57
2062/63	2861.00	2903.82	101.90
2063/64	2852.17	3219.60	112.88
2064/65	3006.00	3055.00	101.63
2065/66	2764.00	2742.00	99.20
2066/67	2661.00	2626.00	98.68
Total	20275.17	19834.15	97.82

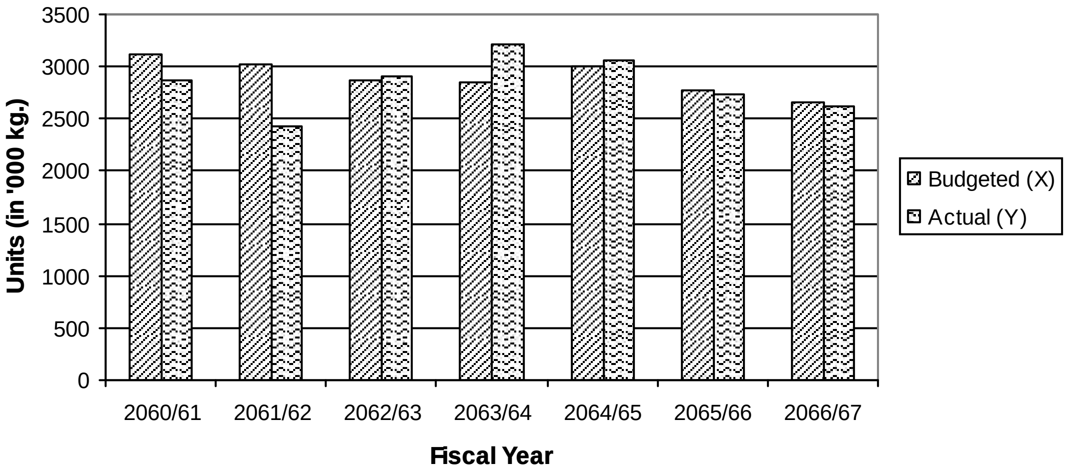
Source: DDC Annual Report

The above table shows that the actual productions are below than the budgeted production except in FY 2062/63, 2063/64 and 2064/65. The achievement is lowest on FY 2061/62 and highest on FY 2063/64. In FY 2061/62, there is decrease the actual production of all products except paneer in comparison with last year production. In FY 2062/63, there is decrease the production of all products except paneer in comparison with last year's production. And in FY 2065/66 and 2066/67 it achieved nearly target. The presented of above table will be more effective by following graph:

Graph 5

Dairy Development Corporation

Budgeted and Actual Production



For finding out of the nature of variability, we can calculate different type of statistical tools like mean, standard deviation, coefficient of variation and correlation of coefficient. The detail calculations of these figures are shown in Appendix-3. Now, summarizing result of Appendix-3, we have,

(Units in 000 kg)

Particulars	Budgeted Productions	Actual Production
Mean	2896.45	2833.45
Standard Deviation	146.83	245.03
Coefficient of variation (C.V.)	5.07%	8.65%

From the above calculations, it is clear that actual productions are more variables than budgeted production. Hence, the coefficient of variation of actual production is higher which means the budgeted production is more constant or homogeneous.

A statistical tool, correlation of coefficient (r) can be used to analyze the relationship between budgeted and actual production. For this purpose budgeted production (X) are assumed to be independent variable and actual production (Y) are assumed to be dependent variable. It is assumed that actual production will increase if budgeted production is increase or vice versa. It means there is positive correlation between budgeted and actual production.

The detail calculation of ‘r’ and P.E. of r is presented in Appendix-3. Here, we can calculate in summarize from of ‘r’ and P.E. in following way:

Karl Pearson’s correlation coefficient (r) = 0.097
Probable Error (P.E.) of correlation coefficient (r) = 0.253

The figure of the value of ‘r’ shows that there is positive correlation between budgeted and actual production. In other words, if plan is increased, the performance would improve. So, the actual achievement also increases. Here, r < P.E. i.e. (0.097) < (0.253). So, the value of ‘r’ is not significant at all. So, it is doubtful that whether actual production will go on same direction of budgeted production at all condition.

5.5 Comparison between Actual Sales and Actual Production

Sales and production is basic function of PPC. Production budget depend upon sales budget. It is necessary to analyze whether production meets sales or not and it is significant to analyze the relationship between sales and production. The following table presents the actual production and actual sales by different fiscal year.

Table 10

Dairy Development Corporation

Actual Production and Actual Sales

(units in 000 ltrs)

Fiscal Year	Actual Production (X)	Actual Sales (Y)	Achievement (t)
2060/61	68832.64	55307.59	80.35
2061/62	71817.64	56568.28	78.77
2062/63	77301.97	57377.86	74.23
2063/64	71034.40	57723.80	81.26
2064/65	73944.00	62973.00	85.16
2065/66	68629.00	57491.00	83.77
2066/67	67174.00	59317.00	88.30
Total	498733.65	406758.53	81.56

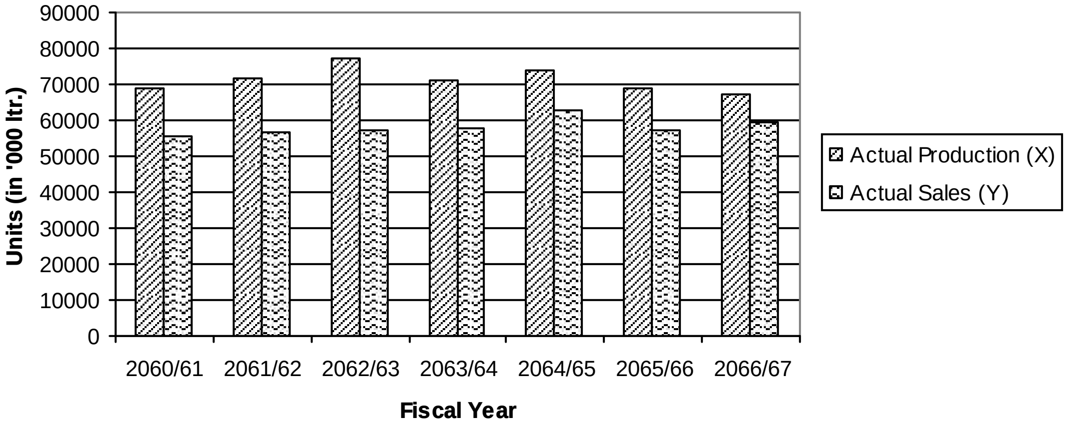
Source: DDC Annual Report

The above table shows that the percentage of achievement has been fluctuating from year to year. The higher difference between actual sales and actual production is 26%. The gap is highest on FY 2058/59 and lowest in FY 2062/63. The above figure can present more effective in graphs below.

Graph 4

Dairy Development Corporation

Actual Production and Actual Sales



To find the nature of variability, we can calculate different type of statistical tool like mean, standard deviation, coefficient of variation and correlation. The detail calculation of these figures are shown in Appendix-4, the summarizing result is given below:

Particulars	Actual Productions	Actual Sales
Mean	71247.66	58108.36
Standard Deviation	3242.13	2280.49
Coefficient of variance (C.V.)	4.55%	3.92%

The above calculation shows that the actual production is more variable than the actual sales. Since, the coefficient of variation of actual production is higher than actual sales that means actual sales is more constant or homogeneous.

A statistical tool, correlation of coefficient (r) can be used to analyze the relationship between actual production and actual sales. For this purpose we can use Karl Pearson's formula, which is denoted by 'r' for coefficient of correlation where X denoted the actual production and Y denoted the actual sales. We assume actual production to be dependent variable and actual sales to be independent variable. Actual sales and production should be positively correlated if the sales are high. Significant of the coefficient of correlation (r) is tested with Probable Error (P.E.). The detail calculation of coefficient of correlation 'r' and probable Error (P.E.) is shown in Appendix-4, which summarizing result is below:

Karl Pearson's Coefficient of Correlation (r) = 0.219
Probable Error (P.E.) of coefficient of correlation (r) = 0.243

The above results show that there is positive correlation between actual sales and actual production. That means when the actual sales increase the volume of actual production also increase to maintain the market demand. Here, the value of 'r' is less than P.E., r < P.E. or 219 < 243. So, the value of 'r' is not significant at all. So, it is doubtful that whether actual production will go on same direction of budgeted production. In other word, this relation may not be applicable at all condition.

4.6 Inventory Plan

Inventory includes the stock in hand i.e. raw material, goods in process and finished goods. A certain level of inventory is needed for operating activities in manufacturing corporation. When production is more than sales, the level of inventory is increased so on the inventory level will decrease when sales is more than production. If the producer is not hold the inventory, he will not supply his products when consumer demand is made so the cause for holding inventories are to continue their work and to supply finished goods regularly. In this fact, it is clear that inventory is necessary but the question is how much invest on inventory? We must minimize the inventory cost. The nature of industry and raw materials affect the size of inventory. If the materials is seasonal then the production activities are operate only few months of a year, at this situation the size of inventory will automatically large i.e. sugar mills, jute mill etc.

In case of DDC, almost production would not store for a long time i.e. milk, yoghurt, cream etc. The following table shows the actual inventory level of finished goods.

Table 11
Dairy Development Corporation
Total Inventory

(in Rs.)

Fiscal Year	Opening Inventory	Closing Inventory
2060/61	89290791.15	78226244.96
2061/62	78226244.96	95105658.97
2062/63	95105658.97	100933245.30
2063/64	100933245.30	38870266.07
2064/65	38870266.07	64731817.32
2065/66	64731817.32	45188469.00
2066/67	45188469.00	41183989.00
2060/61	41183989.00	

Source: DDC Annual Report.

The above table shows that inventory have been fluctuated in different fiscal year. The closing inventory in FY 2061/62 was increased by 17.75% than previous year. Similarly, in FY 2062/63, inventory increased by 5.57% than previous year. Again, inventory in FY 2063/64 decrease by 159.67% than the last year inventory. In 2064/65 inventory increased by 39.95% than the last year's inventory. In FY 2065/66 inventory decreased by 4.32%. So on in FY 2066/67 inventory decreased by 9.72%. In this calculation, it is known that closing inventory is more fluctuating in different period. At beginning year, it is seen increasing trend and latest year it is decreasing trend. The higher investment on inventory minimize the profit. So, DDC should consider minimizing the inventory on that level where deduction of inventory would not effect the regular sales.

4.7 Manpower Planning

It is also called Human Resource Planning. It refers the different activities like personal need, requirement, selection, training and development, job description and evaluation, performance appraisal and carrier development, union negotiation and wages and salary, administration. Manpower plan is the estimate of necessary direct labour requirement to production function for production budget. Manpower planning affects the annual profit plan. The effective planning and controlling of labour cost is essential for every enterprise.

DDC has two types of manpower i.e. administrative and technical. The employees are work as a fixed salary and daily wage basis. The permanent employees get the fixed salary based on time. Beside these, there are few workers working on daily wage basis such as porter, collector etc. Performance reporting, reward and punishment system of DDC is poor. According to informal dialogue of the employees of DDC, we can know that there has political pressure and government interfere on the selection, recruitment and promotion of employees. There is lack of authority delegation and decentralization because all the decision has made from the board where as board members are change with the change of government. The middle and lower level of employees has not involved in planning and decision making. So, almost employees has not motive in their duty. DDC provide different types of training programme for improving the skill and knowledge of employees.

Table 12

The Manpower Planning in FY 2066/67

Types of Employees	Officer	Non officer	Total
Technical	49	490	539
Administrative	30	288	318
Total	79	778	857

Source: DDC Annual Report 2066/67.

The above table shows that there are 857 employees working in DDC permanently. Among them number of technical employees are higher than administrative.

4.8 Profit and Loss Account of DDC

Profit and loss account is developing to report the financial result. It is a tool in accounting system, which presents the operating efficiency of the organization. In case of DDC, it does not prepare the budgeted profit and loss account in advance. It is prepared at the end of each fiscal year. Just for knowing the profit and loss situation of the corporation. Most of the government owned public enterprises are generating a huge amount of loss and are burden of national economy. DDC was also running in loss at beginning period of my research period but at latest period it is generating profit. The profit and loss condition of DDC is my research period is shown below:

Table 13
Dairy Development Corporation
Profit and Loss Trend

(in Rs.)

Fiscal Year	Profit and Loss	Remark
2060/61	(14000248.21)	
2061/62	(21627538.45)	
2062/63	(105902081.10)	
2063/64	(76132944.24)	
2064/65	8931841.41	After tax
2065/66	10588194.00	”
2066/67	7367717.44	”

Source: DDC Annual Report

The above table shows that the profit trend of DDC was very poor before the FY 2063/64. The reason behind such loss is high cost of production, high quantity of closing stock and high administrative expenses. But after that period or since FY 2064/65 that situation is improving. So, we can conclude that if this situation will be more satisfactory, it may earn more profit as well as servicing.

4.9 Variance Analysis

The fluctuation or difference between budget goal and actual performance is called variance. So variance analyze is an effective controlling tool in profit planning and control because it compare the actual achievement with its standard and find the cause of fluctuating and provide the feedback for improving it's performance. For effective variance analysis the following steps should followed systematically.

Step 1: Establishment of standard that is for labour, overhead, sales, production, profit etc.

Step 2: Comparison between actual performance and standard.

Step 3: Finding the deviation, its causes and result.

Step 4: Feedback or corrective actions for improving it's unfavourable variance.

In case of DDC, the developed system of predetermining standard of various expenses and profit is poor. Generally, it has determined the deviation between budgeted and actual sales and budgeted and actual production.

Table 14

Daily Development Corporation

Sales Variance (Milk and Milk Products)

(Rs. in Lakh)

Fiscal Year	Budgeted	Actual	Variance	Remark
2060/61	14,980.59	13.987.00	993.59	Unfavorable
2061/62	15,611.35	13,631.00	1980.35	Unfavorable
2062/63	16,722.68	15,031.00	1691.68	Unfavorable
2063/64	16,405.02	15,428.24	976.78	Unfavorable
2064/65	16,479.83	15,959.07	520.76	Unfavorable
2065/66	16,650.15	15,358.10	1292.05	Unfavorable
2066/67	16,981.76	15,896.63	1085.13	Unfavorable

Source: DDC Annual Report.

Here we find that there is unfavorable variance in all research period. There are two reasons (i) Not realistical planning (ii) Lack of marketing exercise i.e. researching market situation or environment, demand forecast etc. So this analysis help to DDC for importing its performance by implementating this causes of variance.

Table 15

Dairy Development Corporation

Production Variance (Milk, Yoghurt and ice-cream)

(units in '000'ltr.)

Fiscal Year	Budgeted	Actual	Variance	Remark
2060/61	74,430.00	68,832.64	5597.36	Unfavorable
2061/62	74,176.20	71,817.64	2358.56	Unfavorable
2062/63	73,431.00	77,301.97	3870.97	favorable
2063/64	77,300.97	71,034.40	6266.57	Unfavorable
2064/65	77,717.00	73,944.06	3773.00	Unfavorable
2065/66	76,929.71	68,629.00	8300.71	Unfavorable
2066/67	71,736.44	67,174.00	4562.44	Unfavorable

Source: DDC Annual Report.

Table 16

Dairy Development Corporation

Production Variance (Butter, Ghee, Cheese, Paneer and S.M.P.)

(units in '000' kg.)

Fiscal Year	Budgeted	Actual	Variance	Remark
2060/61	3118.20	2861.08	257.12	Unfavorable
2061/62	3012.80	2427.27	585.53	Unfavorable
2062/63	2861.00	2903.82	42.82	favorable
2063/64	2852.17	3219.60	367.43	favorable
2064/65	3006.00	3055.50	49.00	favorable
2065/66	2764.00	2742.00	22.00	Unfavorable
2066/67	2661.00	2626.00	35.00	Unfavorable

Source: DDC Annual Report.

The above table 15 and 16 shows the production variance of DDC. In table 15, expect FY 2062/63 all results are unfavourable. So on in the Table 10, it is shown more unfavourable and less favourable. But latests period the achievement is seen in near to target. As a whole the production variance is not satisfactory. It is found that the main reason is under utilization of it's capacity and planning and implementation of budget is not effective. So it should take effective corrective action to their respective responsibility department to minimize unfavourable variance.

4.10 Cost Volume Profit Analysis

The analysis of relationship between cost, volume and profit is known as cost-volume profit analysis. It is an analytical tool of PPC. It is great helpful in managerial decision-making. Generally, cost volume profit analysis provide the answer to the following question. (Fagu, 2004: 236)

- What sales volume is needed to avoid loss?
- What sales volume is needed to earn desire profit?
- What will be the effect of change in price?
- Which product or operation of a plant should be discontinued and so on?

"The break even analysis is based on some important assumptions which are as follows." (Dongol, 2056: 52-53)

1. All cost can be classified into fixed cost and variable cost. There is no cost other than fixed and variable.
2. Fixed cost will remain constant and variable cost vary proportionately changes with activities.
3. Selling price per unit remain constant. It is not affected by sales volume.
4. That either the firm produces only one product or the sales mix is constant, which is obviously is quite unrealistic.

5. The level of production and sales remain uncharged during the period.
6. Changes in the opening and closing inventories are not significant.

For the calculation of BEP in DDC following assumption should be considered.

1. It is based on PL Account of FY 2066/2067.
2. Activity base is selected in term of sales revenue.
3. Calculation is based on total cost not on production.
4. Fixed cost, variable cost and sales revenue are assumed to be constant.
5. Opening and closing inventories are not changed.
6. Non operating income and expenditure are not included in total revenue.

For BEP analysis we assume that collection expenses and processing expenses as a variable cost and sales expenses, administrative expenses, gratuity expenses, depreciation and interest on loan as a fixed cost. We get the following figure from the profit and loss account of FY 2066/67. After segregation of expenses in to fixed and variable.

Total sales – 15,89,663 (in thousand)
Variable Cost – 14,78,642 (in thousand)
Fixed Cost – 158072 (in thousand)

1. Calculation of profit volume Ratio (P/V ratio)

This ratio shows the proportion of contribution Margin and sales. The formula is:

$$\text{PV Ratio} = 1 - \frac{\text{Variable Cost}}{\text{Sales}} = 1 - \frac{1478642}{1589663} = 0.0698 \text{ or } 6.98\%$$

2. Calculation of Break Even Point (BEP)

$$\text{BEP} = \frac{\text{Fixed Cost}}{\text{P.V. Ratio}} = \frac{158072}{0.0698} = \text{Rs. } 2264641.834 \text{ (in thousand)}$$

This calculation shows that the corporation will be in break even when sales revenue will be Rs. 22,64,641834 thousand. In other word D.D.C. is running in below BEP. So it is clear that selling price has not covered its total cost. There is seen profit in this year but it includes other's sundries income except sales income. So we conclude that DDC has either running with high cost or with the lower price of it's product. To maintain the corporation in profitable condition, all cost should be revised in detail corporation should operate in its full capacity and the selling price of its product should increase to improve the sales revenue. As a whole it should maintain its BEP level.

4.11 Capacity Utilization

Optimum capacity utilization is the key factor of success of any manufacturing enterprises. Lower capacity utilization increase the fixed cost per unit, which make the product is more costly. So on higher utilization of capacity decrease the fixed cost per unit of product but reduce the working life of machine and increases the maintenance cost. In DDC, the capacity of milk production is 125000 litre per day and the capacity of scheme milk powder is 3 metric ton per day. As a whole the capacity of milk and SMP is 456,25,000 litre and 1095 metric ton per year respectively. The capacity utilization of DDC at different period are shown below.

Table 17

Dairy Development Corporation (Milk in lakh line SMP in Metric ton)

Capacity Utilization (Milk, Skim Milk Powder)

Fiscal year	Milk Production	Capacity utilization	SMP Production	Capacity Utilization
2060/61	688.32	150.86%	541.38	49.44%
2061/62	718.17	157.41%	434.20	39.65%
2062/63	773.02	169.43%	547.70	50.02%
2063/64	710.34	155.69%	571.00	52.15%
2064/65	739.44	162.07%	638.00	58.26%
2065/66	686.29	150.42%	584.00	53.33%
2066/67	671.74	147.23%	643.00	58.72%

Source: DDC Annual Report

The above table shows that milk production machine is operating over utilization and SMP production is operating at lower capacity utilization. So we conclude that DDC should purchase new milk producing machine and should increase the profit of SMP to optimum utilization of capacity.

4.12 Analysis of Primary Data

DDC has different departments and their branches in the process of data collection. The researcher tries to understand about the problem faced by DDC. In this way, I come to know about the sales and production planning that DDC has followed the practical knowledge about it. The major tool used for this purpose was opinion questionnaires, total 20 sets of questionnaires were distributed to the five departments of DDC. The responses received from various respondents have been arranged and analyzed in order to facilitate the descriptive analysis of the study. According to the answers of respondents the researcher has tried to analyze the present condition of DDC.

Table 18

Group of Respondents and Code Use

S.N.	Groups of Respondent	Sample Size	Code Use
1	Procurement Department	4	A
2	Production Department	5	B
3	Marketing Department	5	C
4	Finance Department	2	D
5	Administration Department	4	E

Source: Field Survey.

From the table, it is known that DDC has five separate departments. In regular process, all 5 departments participate in teamwork. The result derived from the specific questionnaires are same as follows where I have tried to identify about the main causes of low achievement of DDC.

Table 19

The Main Cause of Low Achievement of DDC

S.N.	Items of Causes	No. of Respondents	Percentage
1	Lack of participative management	5	25%
2	Government interfere	4	20%
3	Lack of promotion of product	2	10%
4	No optimal capacity utilization and more idle resources	6	30%
5	Ineffective distribution systems	3	15%

After analysis of the internal condition of DDC, it is known that why actual achievement of DDC i.e. actual sales, and actual production are low than target (budgeted). There are many problems of DDC. The main problem of DDC is no optimal capacity utilization and more idle resources which is viewed by 30% respondents. So on 25% respondents reply that lack of participative management is also a major problem of DDC. Because of this problem the lower level employs cannot motive. DDC is fully own by government. So government interfere also a main cause of low achievement. In case of employee selection and promotion it directly affects. As the result of that the skilled and capable person cannot reach at right place. So on lack of effective promotion and ineffective distribution system also the causes of low achievement.

In this way after analysis of primary data, it is found that the main causes of deviation of budgeted and actual achievement on production and sales.

4.13 Major Findings

i) Demand of milk and milky product in urban area is very high.

ii) DDC have no long range (strategic) profit plan, objectives are not SMART, lack of budgeting experts and no effective program to attain goal.

iii) There is lack of participative management and MBO (management by objectives) in DDC.

iv) DDC has not collected all milk offered by the formers and not able to provide the loan to the farmer’s requirement.

v) DDC cannot able to it’s network at National wise.

vi) There are others some private dairies which are competiting with DDC.

vii) All production does not sale in market i.e. it is internally consume by employees and workers.

viii) DDC is fully own by government so all activities are directed by government. It has suffering the political pressure on employee selection and their evaluation and promotion. So on the government interferes to the pricing of raw milk and milky products.

ix) DDC has not applied effective inventory policy but being the more demand of milk product, there is not problem for over stocking.

x) DDC was suffering from loss on beginning period of research work but latest period it is operating at gain but possibility of making profit is more than this if DDC improve it’s weakness.

xi) The gap of actual production and actual sales is high.

xii) DDC has not practice of statistical tool applied.

xiii) The actual sales are lower the BEP sales.

xiv) There is not optimal capacity utilization of machine.

CHAPTER – V

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Profit planning is the most important tool of management for planning, implementing and controlling of any business activities. So on Sales and production planning is a basic function of profit planning and control. I have divided this study in 5 chapters. In first Chapter I have studied about DDC and its objectives, Statement of problems, its significant and limitation. In second chapter, I have studied different concept of PPC and its basic term and I have studied different research work which has already done. In third chapter, I have studied about the research methodology that how can the research made effectively. In fourth chapter, I have studied the Budgeted and actual performance of DDC. The Statistical tool like percentage, mean, standard deviation, variation, correlation used and financial tools like variance analysis, cost volume profit analysis have been used to analyze the data. And at last in fifth chapter, I have studied the result or outcome of 4 chapters, i.e., summary, conclusion and recommendation.

5.2 Conclusion

After studying this problem, I have concluded some points which are listed below:

i) Industrialization is the most important factor for economic growth for Nepal in the context of being member of WTO and age of globalization.

ii) Most of the public enterprises of Nepal are weak performing where as objectives are very good.

iii) PPC is the most important tool of measuring performance evaluation of manufacturing enterprises. But many enterprises's managers have not proper knowledge and skill for applying PPC.

iv) Future possibility of DDC is very good if it implies all this suggestions.

5.3 Recommendations

After analyzing the overall aspect of DDC, I feel I can suggest for some recommendation that which will be very useful to DDC for improving its weakness and identifying its opportunities to get success in competitive environment.

1. DDC should follow the participative management for planning and decision making and also applied MBO.

2. DDC should define short-term and long-term planning and its problems, strategies, goals, targets etc.

3. DDC should expand the collection and distribution scheme all over the country. And it should provide the loan for rural poor farmer to keep cattle.

4. DDC should consider demand of its products, market survey at the time of making plan. And it also should consider the price, supply, capacities and policies of other private dairies.

5. Government should not interfere on DDC and its activities i.e. pricing promoting etc. For this management of DDC should make competent for decision making by training programmed.

6. There should be effective advertising policies to inform about the dairy product and its quality for consumers.

7. DDC should be operated on commercial basis. It should be revised and study of its loss oriented product and immediately drop them. And it should be revised the price of its products.

8. To keep optimal inventory, DDC should applied scientific inventory system.

9. DDC should consider the break-even analysis at planning time, so on it should consider variance analysis to find the cause of fluctuation and correct it.

10. The performance evaluation system should be established by using different approaches of management.

11. DDC should consider the sales plan on the time of planning production. It should coordinate between sales and production unit.

12. DDC should control the unproductive expenses by preparing effective planning.

13. The environmental auditing system should be established by using environmental experts.

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APPENDIX – 1

Let, Budgeted Sales = X (Rs. in Lakh)

Actual Sales = Y (Rs. in Lakh)

F/Y	**X**	**Y**	$x = (X - \overline{X})$	$y = (Y - \overline{Y})$	x^2	y^2	**xy**
2060/61	14980.59	13987.00	-1281.04	-1062.29	1641063.48	1128460.04	1360835.98
2061/62	15611.35	13631.00	-650.28	-1418.29	422864.08	2011546.52	922285.62
2062/63	16722.68	15031.00	461.05	-18.29	212567.10	334.52	-8432.60
2063/64	16405.02	15482.24	143.39	432.95	20560.69	187445.70	62080.70
2064/65	16479.83	15959.07	218.20	909.78	47611.24	827699.65	198514.00
2065/66	16650.15	15758.10	388.52	308.81	150947.79	95363.62	119978.86
2066/67	16981.76	15896.63	720.13	847.34	518584.21	717958.08	610194.95
Total	113831.38	105345.04	0	0	3014204.59	4968835.13	3265457.51

(i) Calculation of Arithmetic Mean $(\overline{X})$

$$\text{A.M.}(\overline{X}) = \frac{X}{N} = \frac{113831.38}{7} = 16261.63 \qquad \text{A.M.}(\overline{Y}) = \frac{Y}{N} = \frac{105345.04}{7} = 15049.29$$

(ii) Calculation of Standard Deviation (S.D.)

$$\text{S.D.}_X = \sqrt{\frac{x^2}{N}} = \sqrt{\frac{3014207.59}{7}} = 656.20 \qquad \text{S.D.}_Y = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{4968833.13}{7}} = 842.52$$

(iii) Calculation of Coefficient of Variation (C.V.)

$$C.V._X = \frac{S.D._x}{\overline{X}} \times 100 \qquad C.V._y = \frac{S.D._y}{\overline{Y}} \times 100$$

$$= \frac{656.20}{16261.63} \times 100 \qquad = \frac{842.52}{15049.29} \times 100$$

$$= 4.03\% \qquad = 5.60\%$$

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

$$= \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}} = \frac{3265457.51}{\sqrt{3014201.59 \times 4968835.13}} = 0.84$$

(v) Calculation of Probable Error (P.E.) of Correlation of Coefficient(r)

$$= \frac{0.6745(1 - r^2)}{\sqrt{N}} = \frac{0.6745[1 - (0.84)^2]}{\sqrt{7}}$$

$$= 0.075$$

APPENDIX – 2

Let, Budgeted Production = X (Rs. in Lakh)

Actual Production = Y (Rs. in Lakh)

F/Y	X	Y	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x^2	y^2	xy
2060/61	74430.00	68832.64	-673.05	-2415.02	452996.30	5832321.60	1625429.21
2061/62	74176.20	71817.64	-926.85	569.98	859050.92	324877.20	-528285.96
2062/63	73431.00	77301.97	-1672.05	6054.31	2795751.20	36654669.58	-10123109.04
2063/64	77300.97	71034.40	2197.92	-213.26	4830852.33	45479.83	-468728.42
2064/65	77717.00	73944.00	2613.95	2696.34	6832734.60	7270249.40	7048097.94
2065/66	76929.71	68629.00	1826.66	-2618.66	3336686.76	6857380.20	-4783401.48
2066/67	71736.44	67174.00	-3366.61	-4073.66	11334062.89	16594705.80	13714424.49
Total	525721.31	498733.65	0.00	0.00	30442135.00	73579683.59	6484426.75

(i) Calculation of Arithmetic Mean $(\bar{X})$

$$\text{A.M.}(\bar{X}) = \frac{\sum X}{N} = \frac{525721.31}{7} = 75103.05$$

$$\text{A.M.}(\bar{Y}) = \frac{\sum Y}{N} = \frac{498733.65}{7} = 71247.66$$

(ii) Calculation of Standard Deviation (S.D.)

$$\text{S.D.}_X = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{30442135}{7}} = 2085.40$$

$$\text{S.D.}_Y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{73579683.59}{7}} = 3242.13$$

(iii) Calculation of Coefficient of Variation (C.V.)

$$C.V._X = \frac{S.D._x}{\overline{X}} \times 100 \qquad C.V._y = \frac{S.D._y}{\overline{Y}} \times 100$$

$$= \frac{2085.40}{75103.05} \times 100 \qquad = \frac{3242.13}{71247.66} \times 100$$

$$= 2.78\% \qquad = 4.55\%$$

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

$$= \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}} = \frac{6484426.75}{\sqrt{30442135.00 \times 73579683.59}} = 0.137$$

(v) Calculation of Probable Error (P.E.) of Correlation of Coefficient(r)

$$= \frac{0.6745(1 - r^2)}{\sqrt{N}} = \frac{0.6745[1 - (0.137)^2]}{\sqrt{7}}$$

$= 0.25$

APPENDIX – 3

Let, Budgeted Production = X (Rs. in Lakh)

Actual Production = Y (Rs. in Lakh)

F/Y	X	Y	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x^2	y^2	xy
2060/61	3118.20	2861.08	221.75	27.63	49173.06	763.42	6126.95
2061/62	3012.80	2427.27	116.35	-406.18	13537.32	164982.19	-47259.04
2062/63	2861.00	2903.82	-35.45	70.37	1256.70	4951.94	-2494.62
2063/64	2852.17	3219.60	-44.28	386.15	1960.72	149111.82	-17098.72
2064/65	3006.00	3055.00	109.55	221.55	12001.20	49084.40	24270.80
2065/66	2764.00	2742.00	-132.45	-91.45	17543.00	8363.10	12112.55
2066/67	2661.00	2626.00	-235.45	-207.45	55436.70	43035.50	48844.10
Total	20275.17	19834.15	0.00	0.00	150908.71	420292.38	24502.03

(i) Calculation of Arithmetic Mean $(\bar{X})$

$$\text{A.M.}(\bar{X}) = \frac{X}{N} = \frac{20275.17}{7} = 2896.45$$

$$\text{A.M.}(\bar{Y}) = \frac{Y}{N} = \frac{19834.15}{7} = 2833.45$$

(ii) Calculation of Standard Deviation (S.D.)

$$\text{S.D.}_X = \sqrt{\frac{x^2}{N}} = \sqrt{\frac{150908.71}{7}} = 146.83$$

$$\text{S.D.}_Y = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{420292.38}{7}} = 245.03$$

(iii) Calculation of Coefficient of Variation (C.V.)

$$\text{C.V.}_X = \frac{\text{S.D.}_x}{\bar{X}} \times 100 = \frac{146.83}{2896.45} \times 100 = 5.07\%$$

$$\text{C.V.}_y = \frac{\text{S.D.}_y}{\bar{Y}} \times 100 = \frac{245.03}{2833.45} \times 100 = 8.65\%$$

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

$$= \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}} = \frac{24501.95}{\sqrt{150907.45 \times 420292.38}} = 0.097$$

(v) Calculation of Probable Error (P.E.) of Correlation of Coefficient(r)

$$= \frac{0.6745(1 - r^2)}{\sqrt{N}} = \frac{0.6745[1 - (0.097)^2]}{\sqrt{7}}$$

$= 0.253$

APPENDIX – 4

Let, Budgeted Sales = X (Rs. in Lakh)

Actual Sales = Y (Rs. in Lakh)

F/Y	X	Y	$x = (X - \overline{X})$	$y = (Y - \overline{Y})$	x^2	y^2	xy
2060/61	68832.64	55307.59	-2415.02	-2800.77	5832321.60	7844312.59	6763915.57
2061/62	71817.64	56568.28	569.98	-1540.08	324877.20	2371846.41	-877814.80
2062/63	77301.97	57377.86	6054.31	-730.50	36654669.58	533630.25	-4422673.46
2063/64	71034.40	57723.80	-213.26	-384.56	45479.83	147886.39	82011.27
2064/65	73944.00	62973.00	2696.34	4864.64	7270249.40	23664722.33	13116723.42
2065/66	68629.00	57491.00	-2618.66	-617.36	6857380.20	381133.37	1616655.94
2066/67	67174.00	59317.00	-4073.66	1208.64	16594705.80	1460810.65	-4923588.42
Total	498733.65	406758.53	0.00	0.00	73579683.59	36404341.99	11355229.51

(i) Calculation of Arithmetic Mean $(\overline{X})$

$$\text{A.M.}(\overline{X}) = \frac{X}{N} = \frac{498733.65}{7} = 71247.66$$

$$\text{A.M.}(\overline{Y}) = \frac{Y}{N} = \frac{406758.53}{7} = 58108.36$$

(ii) Calculation of Standard Deviation (S.D.)

$$\text{S.D.}_X = \sqrt{\frac{x^2}{N}} = \sqrt{\frac{73579683.59}{7}} = 3242.13$$

$$\text{S.D.}_Y = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{36404341.99}{7}} = 2280.49$$

(iii) Calculation of Coefficient of Variation (C.V.)

$$\text{C.V.}_X = \frac{\text{S.D.}_x}{\overline{X}} \times 100 = \frac{3242.13}{71247.66} \times 100 = 4.55\%$$

$$\text{C.V.}_y = \frac{\text{S.D.}_y}{\overline{Y}} \times 100 = \frac{2280.49}{58108.36} \times 100 = 3.92\%$$

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

$$= \frac{xy}{\sqrt{(x^2)(y^2)}} = \frac{11355229.51}{\sqrt{73579683.59 \times 36404341.99}} = 0.219$$

(v) Calculation of Probable Error (P.E.) of Correlation of Coefficient(r)

$$= \frac{0.6745(1-r^2)}{\sqrt{N}} = \frac{0.6745[1-(0.219)^2]}{\sqrt{7}}$$

= 0.243

APPENDIX - V

Income statement of DDC for 2 years ending FY 2066/67

Particulars	2062/67	2065/66
Sales	158,96,63,476.25	1535810462.00
Others income	1,31,41,374.88	1,15,45,735.15
Closing Stock	411,83,989.00	45188469.00
Gross Income (A)	1643988840.13	1592544666.21
Production Cost of Dairy product:		
Opening Stock	45188469.00	64731817.32
Collection Expenses	1132317996.93	1127653155.15
Processing expenses	346325345.85	233845039.03
Selling Expenses	41093440.96	39302977.33
Total Production Cost (B)	1564925252.74	1465532988.83
Administrative and other expenses:		
Administrative expenses	76,692,653.02	583,04,547.38
Provision for Sundress Expenses	2826500.00	2826500.00
Depreciation	29406299.23	29,993611.51
Gratuity Expenses Provision	3531055.40	17450023.17
Interest and financial expenses	4522112.68	4319401.26
Total Administrative Cost (C)	116978620.33	112894083.32
Profit before Tax (A-B-C)	(37915032.94)	14117594.06
Income from sales assets (Capital income)	47666060.38	
Provision for Income Tax.	2383,310.00	3529400.00
Profit After Tax.	73,67,717.44	10588194.06

Dairy Development Corporation Balance Sheet for 2 years ending FY 2066/67

Liabilities	2066/67	2065/66
Corporation fund	549452,794.68	549452794.68
Cash subsidy fund (Foreign Donors)	15,45,264.97	1545264.97
Cash Revolving fund		914210.00
Long term loan	84,251,595.10	85201701.53
Current liabilities and provision	358,689,031.18	347112903.90
Total	9939386860.02	984226875.08
Assets		
Fixed Assets	273618540.81	304864159.54
Provident fund Investment	1545264.97	1545264.97
Current Assets	496,260287.49	466154171.61
Deffered expenses	600,033.67	3426533.67
Accumulated loss	221914559.08	208236745.29
Total	993938686.02	984226875.08

Appendix – VI

Supplementary Research Questionnaires

Name of the Respondents: ………………………………………………..

Position: ……………………… Department: ……….…………….

Tenure of Service …………………………………….

Sex: ……… Academic Qualification: …………………..……….

Professional: …………………………..

Please tick as (√) on the one or more boxes and fill in the blanks as per question required.

1. What were the specific objectives of DDC?
   (a) Expansion (……………….)
   (b) Optimum capacity utilization (……………….)
   (c) Return on capital employed (……………….)
   (d) Net profit margin on sales (……………….)
   (e) Other if any (……………….)
2. Are they achieving now?
   Yes (………) No (………)
3. Are they satisfactory or favourable?
   Yes (………) No (………)
4. Would you state of the main cause of low achievement? if any please give some reason.
   (a) ………………………………….
   (b) ………………………………….
   (c) ………………………………….
   (d) ………………………………….
   (e) ………………………………….
5. Would you mention the financial position of DDC?
   (a) Very good ( ) (b) Good ( )
   (c) Satisfactory ( ) (d) Poor ( )

6. If poor, would you mention the cause?

(a) ……………………… (b) ………………………

(c) ……………………… (d) ………………………

7. What management system are applied in DDC in phase of planning, decision making and controlling?

(a) Participative management ( )

(b) Management by objectives MBO ( )

(c) Centralize Decision ( )

(d) Autocratic management ( )

8. On what basis sales and production budget is prepared?

(a) Large range ( ) (b) Short range ( )

9. Who are responsible for preparing sales plan.

(a) …………………… (b) ………………………

(c) …………………… (d) ………………………

10. What pricing methods are accepted?

(a) Cost plus pricing ( )

(b) Marginal pricing ( )

(c) Other methods ( )

11. How does DDC sale it's product?

(a) Cash ( )

(b) Credit ( )

(c) Both ( )

12. What is the distribution channel of DDC?

(a) Producer – consumers ( )

(b) Boothman – consumer ( )

(c) Producer – Wholesaler – Retailer – Consumer ( )

(d) Producer – Agent – Wholesaler – Retailer – Consumer ( )

13. What approaches are used for sales forecasting?

(a) ……………………. (b) ………………………

(c) ……………………. (d) ………………………

14. What are the promotion mix used by DDC to inform it's product and its quality to consumes?

(a) Advertisement ( ) (b) Sales promotion ( )

(c) Personal selling () (d) Publicity ( )

15. What are the main problem in production process by of DDC?

(a) Old Machinery ( ) (b) Perishable raw material ( )

(c) Not excellent workers ( ) (d) Government intervention ( )

16. What are the DDC products?

(a) ………………………. (b) ……………………….

(c) ………………………. (d) ……………………….

17. What inventory policy has been adopted?

Raw Material		**Finished Goods Stock**	
(a) Stable	( )	(a) stable	( )
(b) Fluctuating	( )	(b) Fluctuation	( )
(c) Average	( )	(c) Average	( )

18. Which production policy has been adopted?

(a) Seasonal ( ) (b) Flexible ( )

(c) Stable ( ) (d) Others ( )

Give reason if any of these. (……………………………………… ………………………………………...………………………)

19. From which market raw milk are purchased?

(a) Farmers ( ) (b) Domestic Market ( )

20. How many staff are working in DDC now?

Total staff technical and administrative are (…………..)

21. What is the wages payment system?

(a) Time basis ( ) (b) Work basis ( )

22. How does DDC measure its activities?

(a) Production Unit ( ) (b) Sales Unit ( )

(c) Sales Rupees ( ) (d) Others ( )