Chapter One
INTRODUCTION

1.1 General background: -

Nepal, wedged strategically by the two economically giant countries India and China is a landlocked country. It is located on the southern flank of the Himalayan range. The country lies at the latitude of $26^0 22^0$ N to $30^0 27^0$ N and $80^0 4^0$ E to $88^0 12^0$ E in range of longitude. The altitude rises from 60meters above sea level in the south to highest point on earth Mt. Everest at 8848meters from the sea level in the north. Nepal covers an area of 1,47,181 sq. kilometers. It extends about 885 km from east to west in length and its north-south span varies from 145km to 241kmt. Within a short north south extension of less than 250kmts a great variation can be found in its biodiversity and climate. Due to its unique geographical position and latitudinal variation, it is one of the richest landlocked countries in the world in nature resources. At the same time the terrain and the topography of Nepal have made it a country of many constraints.

Nepal contains more than a dozen ethnic groups originating from three major ethnic division; Indo-Aryan, Tibeto-Burman and Aborigine. They all live in harmony with their own culture and tradition respecting each other norms and values. Thus, due to this variation in its geography and ethnic diversity, Nepal has both opportunities and constraints side by side.

Ecologically Nepal is divided into Himalayan region, Hilly region and Terai region as three regions. The Himalayan region constitutes the highest Himalayan ranges in the world lying in the northern part of the country. The elevation of these mountain ranges varies from 3000 mts. to 8848mts. It covers about 25% of the total land of the country. It is covered by snow all round the year. Here only small herbs of medicinal values grew. Thus this region has high potentiality of medicinal plants. Similarly, below the Himalayan region lie hilly region. It covers about 50% of the total land of the country. The elevation ranges from 600 meters to 3,000 meters above the sea level. The width ranges from 80 to 125 meters. The southern belt of the country below the hilly region is a Terai region. It is a food bed of the country. It occupies 25%of the total land of the country. Of the total land area in terai, only 40%is suitable for cultivation. The elevation ranges from 60 to 300meters. Nepal is also rich in natural resources. The evergreen forest, the non-stoppable flowing water and various kinds of flora and fauna have truly made this country rich in natural resources. Only the need is to identify them and utilize in a proper way. Mineral potential of the country is yet to be properly assessed. Due to lack of scientific and extensive geological survey of the country, the actual statistics of the mineral resources are not available yet.

1.2 Industrialization in Nepal

Industrialization is an important factor for achieving the basic objective of a country's economic and social progress. Industrialization not only provides goods and services but also creates employment opportunities. It facilitates an effective mobilization of resources of capital and skill, which might otherwise remain unutilized. Industrialization plays a crucial role in achieving high rate of economic growth in developing countries. Economic development of a country is contingent to the industrialization, which is conventionally measured by increment in the share of industry and a rise in per capita income. Industrial development a phenomenon more than what has been traditionally defined is a function of interaction among the set of parameters comprising resources, human capital and natural technology and management dynamism. In the history of industrialization, especially after the Second World War a very few developing countries in Asia witnessed especially newly industrialized economies. Nepal, a developing region in Asia, where development efforts have been thwarted by amazingly increasing population growth rate, acute disguised unemployment and object poverty, unstable politics and other many factors that have halted the aspirations of better future of this region.

Industrialization is a comparatively new phenomenon in Nepal. The Biratnagar Jute Mill set up in 1936 marked the beginning of organized industry in the country. In the years that followed, industrial growth was accelerated. Industries like the Morang Cotton Mills (1941), the Morang Sugar Mill (1946), the Raghupati Jute Mill (1946) and the Juddha Match Factory (1946) were set up in Biratnagar in collaboration with Indian businessmen. These industries set a milestone in the industrialization history of Nepal. Before 1950, the environment was not favorable to develop the industrial sector and the government had no vision about this matter. Those that were established early were liquidated later. They could not sustain for long period. Industrial development in Nepal however started getting regular attention of the government under the aegis of the development plans after the dawn of democracy in 1951. Prior to 1962, there was no conducive environment for industrial development in Nepal. In 1962, Nepal formulated its first industrial policy to provide incentives to industries so that the development could be insured. In 1974, the government came out with a new industrial policy, which had the fundamental objectives of contributing to the growth of imports substitution and exported industries. Several industries were established in the public sector mostly with the financial and technical assistance of the then USSR and China. As a result, Nepal witnessed the development of quite a large number of manufacturing industries in the public sector. The industrial development strategy of the government, however, changed after mid 1980s. The government then shifted its development strategy from state-led development to market-led open economy. As a result, many of the public sector industrial units privatized in the early 1990s.After the restoration of democracy in 2007 B.S., later 5 years was the stagnant period for political and development of the country. Only from 2013 B.S., the government came out with distinct vision. From then on 5 years development plans were carried out. Now Nepal is in tenth plan and up to this period the country has achieved a lot but not as expected.

1.3 Nepalese Economy and Agriculture

Being the agricultural country, agriculture dominates the economy of Nepal, which accounts about 36% of GDP; provides employment opportunities to more than 80%of the economically active population. Truly speaking, agriculture is the backbone of our country. Economy and the agriculture are synonyms of each other in the context of Nepal. More than 92% of population depends upon the agriculture but today this number has decreased. Still more than 75% of the population depends on the agriculture. Due to urbanization and industrialization in the country slowly people are shifting from the agricultural sector to industrial sector and service sector. There is no doubt that until and unless there is full development and fully skilled people in these sectors, agriculture will dominate in the economy of Nepal in coming days also. In an agriculture country like Nepal, effective mobilization of agricultural resources is very necessary. For the economic development of the country, agriculture sector must be developed. Nepal once recognized as a food grain-exporting country is in the situation of being recognized as a food grain-importing country. This situation may be regarded as a challenging one.

From the very beginning of planned development efforts, the government of Nepal has given priority to the agriculture sector in every plan period considering the fact that the sustainable economic development was not possible without the development of agriculture. In the first plan period the government had allocated 10.8% of the total budget in the agriculture, irrigation and forest. Similarly 14%, 17%, 21%, 25%, 29%, 34.3%, 25.8%, 27.05% in second, third, fourth, fifth, sixth, seventh, eighth and ninth plan period respectively. Nepal's industrial base is limited. Most of the industries are based on agriculture raw material. Large manufacturing plants are owned and operated by the government. Major manufactured products include jute, sugar, cigarettes, beer, matches, shoes, cement and bricks. Traditional cottage industries such as basket and carpet weaving are also important to Nepal's economy, which are based in agriculture material. Thus directly or indirectly agriculture sector has played an important role in the economy of the country.

Long-term agriculture development plan is under implementation aiming to reduce poverty and increase economic growth by means of increasing employment opportunities and agriculture production. Recently Nepal has adopted "one-village one-product" policy aiming to increase the production of exportable under the modality of public-private partnership. The main objectives of this program are to help reduce the level of poverty and boost economic development at the local level by increasing the export of value added products. The tenth plan has set the objectives for the development of agriculture. Mobilization of agricultural and rural credit in an integrated manner to help rise in gross domestic product by increasing the agricultural productivity, and micro credit be increased to check the rampant rural poverty by involving maximum number of deprived people in production oriented and income generating micro enterprise.

1.4 Historical Background of Nepal Food Corporation

The effort of the government to provide the food in the country was seen only after the establishment of "Rasad godown" in Thapathali. The rasad godown was established by the Rana prime minister to collect the food grains (paddy) from the land such as "guthi" and "raikar" to provide to the army, police and to the government employees as per their demand. It is also heard that the rice from the rasad godown is also used in the religious event and in the school. The fact that the Commander in chief being the head of the rasad godown reflects the importance given by the government in the supply of food at that time. "Rasad Adda" had helped the earthquakes victims in 1990 B.S. Due to the increasing demand of food in the Kathmandu valley, the system of distributing the food by the coupon system to those who cannot afford to buy the rice was seen at that time. The place where Bishal Bazzar is now located, there was a sales department and this provides the facility of distributing the food grain and is called the then "Janasewa Hall". After the change of political system in 2007 in the country the defense law was outlawed and the administrative law was implemented.

Under this act “Milling and Sales Department of Paddy” and the “Rasad godown” of paddy were merged and was called “Sadar Paddy godown”. For this separate budget system was introduced. It was later termed as “Pradesik Khadhya Niyantran” in 2008 B.S. In 2013 B.S. the Pradesik Khadhya Niyantran was changed to “Khadhya Sanchya Bikri Bibhag”. It helps to store the food grain. To manage the growing demand of food in the valley the name was again changed into “Upathayka Khaddanna Bandobast Samiti” in 2018. The importance of the distribution of food grain to the district, which is deficit in food grain, was felt. Thus, according to the corporation act 2021, in the same year the name was again changed in to the “Khadhya Bewasta Sasthan”.

In 2028\029 B.S the country has to face the drought resulting an unexpected low production in the crops. This makes a serious problem in the country. There was a deficiency of food grains in the country. Since there was no organizational network of Khadhya Bewasta Sasthan, it became difficult in operation and in distribution of the food grain. Realizing the fact, Agriculture Supply Corporation and the Food Management Corporation was merged together to solve the problem. Later on it was felt that the single corporation couldn’t operate the work effectively having two different natures of work. Thus the responsibility of supplying of food was taken out from the agriculture sales and Purchase Corporation to form the different corporation, which can operate separately with full authority. HMG of Nepal, realizing the need of a specialized organization taking care of proper food supply and distribution in the country including the Kathmandu valley established the Nepal Food Corporation (NFC) in 2031 B.S (1972 A.D) Mangsir 17 under the full ownership of the government which is running till to date. The Nepalese Ministry of industry, commerce and supply is responsible for supplying essential commodities such as petroleum products along with coal, timber, food grains through National Trading Limited, Nepal Oil Corporation, Nepal Food Corporation, Nepal Coal Limited and Timber Corporation of Nepal and others. Nepal Food Corporation is one of them and operates under the ministry of industry, commerce and supply.

1.5 Objectives of Nepal Food Corporation (NFC)

Despite of being an agricultural country, Nepal faces the problem of food shortage for a long time. Due to great variation in the topography of Nepal, all the land acquired by it is not suitable for the agriculture. Nepal is divided into three topographical regions; mountainous region, hilly region and terai region. Only the hilly and terai region are suitable for cultivation. Hilly region is also not that much suitable for the cultivation as compare to the terai region. Thus, terai region is the sole contributor in the supply of food grains in the country. In terai, of the total land only one- third of the land is used for the cultivation. Thus Nepal cannot depend fully on its production resulting in great import of food grains from the neighboring country and the third world, which provides the food grain as donation. Out of the total population, almost 40% of the Nepalese are facing with the food shortage every year. Hence management of the food economy is the major function of the ministry.

The distribution of food grains to the food deficit area and to the remote hilly area in the fair prices is the main responsibility of the Nepal Food Corporation. With a view to fulfill this responsibility, various activities such as procurement of food grains, building up and maintenance of food stocks, their storage, movement and delivery to the distributing agencies are undertaken. A close watch is needed on production, stock and price level of food grains. Efforts are made to ensure their adequate availability at reasonable prices in different parts of the country. Procurement and distribution of food are the strategies of the government for ensuring food security in the remote and food deficit areas. NFC procures food grains at the subsidized price announced by the government. Certain hill and mountain districts are considered low income, remote and inaccessible areas. Accordingly, NFC supplies the food grains in these areas at a highly subsidized price by providing transport subsidy. Sales of food grains are carried out in the hill and mountain districts by NFC's own field offices, sales depot and co-operatives and through private. It also helps in maintaining the price whenever the shortage of food grains appears by interfering into the market.

The major objectives carried out by NFC are as follows: -

1. To implement the food policy of the government in effective way.
2. To procure, collect food all over the country, store, transport and supply, and sales and distribution of food grains in fair and reasonable prices for the purpose of mitigating food deficit areas.
3. To purchase the food grain by securing the interest of the farmers.
4. To ensure to implement the program of price stabilization in order to prevent the interests of customers.
5. To keep the appropriate stock of food stocks as per the policy of the government for the purpose of ensuring food security within the country.
6. To make the arrangements of godowns at different appropriate places to purchase, procure, store and sales of food grains as per the policy of the government.

7. Besides the food grains and daily essentials consumable foodstuffs, the corporation if required performs business trade for becoming self-dependent.
8. To establish and to operate the mill factories to carry out the food processing activities.
9. To perform the task according to the direction of HMG in collecting, transporting, storing and making the arrangements of distributing of food stuffs obtained by HMG in time to time from different diplomatic countries, donors and international associations and other corporations.
10. To export and import food stuffs from different countries.
11. To perform the transactions as directed by the government.
12. To remain active to gain the goal of making corporation self-dependent.
13. Maximum utilization of its fixed and non-fixed assets by purchasing, selling, leasing, renting etc to make the corporation self-dependent.
14. To provide food donations in any way in different critical situation like natural calamities and chronic food shortages.
15. To provide extra special services in case of great festivals like Dashain, Tihar and other national occasions.

1.6 Operations of Nepal Food Corporation (NFC)

The corporation operates essentially on a system of quotas for each district, set up by the government. Once the quota has been set, NFC supplies the food according to the agreed quota unless there is an abnormal situation. The annual budget is prepared on the basis of fixed quotas along with the information of field offices and the direction of the government. After the quotas are fixed, the basic operations that NFC carried out are procurement, storage, transport and distribution of food grains to the needed person. These operations of NFC are described briefly.

a. **Procurement**: Procurement is the first step of operating process of NFC. Especially the head office of NFC decides to purchase the quantities of food grains at reasonable price from the surplus areas to meet the demand of the food deficit areas. The corporation normally uses the methods of procurement either through the tender procedure or by purchasing from the local pricing committee.

b. **Storage:** The procured food grains from different parts of the country are stored in NFC godowns. Similarly the food grains supplied by the donor countries and the food grains purchased from other countries and neighboring countries are also stored in the godwons. The NFC officers regularly inspect these storage houses. The NFC has a number of storage houses in different part of the country having total storage capacity of 97,370 metric tonne in 166 godowns.

c. **Transportation:** After the storage of food grains in the storage house, the next operation is to transport these food grains to the food deficit areas in the different part of the country. Due to topographical and geographical condition of the country transportation of food grains has always remain a big challenge to NFC. Lack of access of roads to hilly and mountain areas obstruct the distribution of the food grains. The means of transportation are trucks, animals and porters. In the inaccessible remote hilly and mountainous region the food grains are airlifted. This increases the price of food grains. NFC for this reason has given the privilege in the transportation.

d. **Distribution:** The government basically regulates distribution of food grains by NFC. The selling prices of the food grains are fixed by the government at lower than that of market price. Sales quotas are fixed for district at the central level in consolation with the FAMSD (Food Agriculture and Market Department). NFC distributes the food grains to the people on family basis or per head basis on monthly basis. The distribution process is done from the local depot and godown. In the food deficit areas district level food management committee are organized under the chairmanship of the president of DDC to organize and regulate the food distribution in the district. During the shortage time, CDO plays an important role in distribution of food grains by issuing coupon system or imposing maximum limit of purchase at a time.

1.7 Present Condition of Nepal Food Corporation (NFC)

One of the oldest public corporation which is fully devoted to the Nepalese people has come to this period with lots of up and downs. Despite its own problems and constraints, concentrating on consumer's needs and interest, Nepal Food Corporation grows from strength to strength in winning the heart of Nepalese people. NFC has enjoyed a major share of the total rice market in the country. But it cannot retain its position in the market for a long time. Today many other companies and the individual businessman have come to the market. Today NFC has a minor share in the market but still it is the only corporation that has faith of the consumers. It has enjoyed a strong imagery and appeal amongst consumers. The extensive distribution network of NFC is the major strength. The products are available to consumers, even in the most remote places and the smallest of villages with a few populations. The corporations name conjures up fond memories across the length and breadth of the country.

During the time of its establishment it has extended its services to all over the country from the 166 godowns located at 55districts. Today Nepal Food Corporation has established the necessary physical infrastructure all over the country for regular and effective supply of the food grains. It has one head office located in Kathmandu at Bhadrakali, 8 zonal offices, 1 modern rice mill, 30 branch offices, and 61 depot offices. Similarly there are 617 human resources. Of the total manpower; there are 96 people in officer's level, 521 in sub officer's level. There are two Food Processing Mills having capacity of 2 ton in Rajapur (Bardiya district) and ½ ton in Mahendranagar (Kailali district). But these mills are not in operation now from the time of insurgency. Today NFC has a storage capacity of 97,620 metric ton of food grains. During its established period its capital was Rs. 34,75,000 now it has increased up to Rs 99,04,96,000. In fixed assets NFC has total of 1,034 ropanies of land, 166 godown house of having a capacity of 97,370 metric tons for storage of food grains and 28 office buildings. The corporation is operating its transaction by taking loan from the commercial banks of Rs 50 crore by keeping the corporation's land as mortgage. Of the total loan, lions share of the loan is used in the administrative expenses (nearly 12 crore) and interest expenses causing availability of very low capital for the transactions (nearly 15/16 crore).

1.8 Organizational Structure of NFC

The organizational and management of NFC provides the structural framework of duties and responsibility of the personnel working in the organization. The structural pattern of NFC becomes the mechanism through which the management directs, controls and coordinates the activities of the enterprise.

Offices and Branches	**Number**
Central office	1
Zonal office	8
Branch office	30
Depot	61

Manpower	Number
First class officers	96
Assistant officers	521

Structure of operational committee

S.No	Representation of Ministry/ Organization	Position
1	Joint-Secretary, Ministry of Commerce Industry and supply	Chairman
2	Joint-Secretary, Ministry of Finance	Operational Member
3	Joint-Secretary, Ministry of Home	Operational Member
4	Joint-Secretary, Ministry of Agriculture and cooperatives	Operational Member
5	Joint-Secretary, Ministry of Commerce, Industry and supply	Operational Member
6	Consultant, Appointed by Government	Operational Member
7	Joint-secretary, Ministry of Commerce, Industry and Supply	Guest Operational Member
8	Director General, Nepal Food Corporation	Member Secretary

Source: NFC (Head office Bhadrakali)

1.9 Statement of the Problem

With the per capita income of about $269, Nepal is a developing country in the world. With a limited number of the industry and service providing sector, where the industrialization and the service sector are not in full fledged development, the country economy is moving in very slow pace. Limited natural resources, landlocked position, difficult topography and poor infrastructure are only some of the handicaps with which this economy struggles. The economy of the country has not kept pace with the country's high population growth thus depending most of the people in the agriculture sector. Agriculture has been the major earning for the most of the Nepalese people for the long period in the history of Nepal. Though the agriculture has been the major profession of the Nepalese people, they were facing the problem of food shortages and malnutrition. Due to lack of enough land, modern agricultural practices, facilities of irrigation, scientific equipments, better fertilizers and improved seeds the production is not enough to fulfill the country's needs. Majority of the farmers find it hard to live with their produce more than six months. Even if some farmers do produce more, they will not benefit much due to lack of transportation and marketing facilities.

To cope with this problem the government of Nepal has established a separate organization called Nepal Food Corporation (NFC) in 17th Mangsir 2031. It was the turning point for the people of rural areas. During its establishment it has enjoyed the lion's share of the market. It has got the monopoly in the market. But the organization is running in loss, which is the matter of concern. NFC is running in loss since the time of its establishment. Despite of full government support and utmost monopoly on food supply NFC could not run in profit. Instead of generating profit it is running in loss. Until now its accumulated loss is 1,13,43,31,574 which is difficult to recover. Besides that the government gives more than 25 crore as donation every year for transportation and interest facility. In the FY 2063/064 only, NFC has received Rs. 35 crore 60 lakhs as donation causing burden for the government. The high cost in administration and transportation and ineffective management planning has hindered in gaining the profit. It has not successfully achieved the objectives. A poor performance is the outcome of poor planning, controlling and decision-making. Thus whether this loss of the organization is due to lack of efficient management of the organization or whether the employee of the organization are acquainted with the accounting tools, whether they are acquainted with the profit planning and control or not. Reason thus has to be found out. High cost in administration and transportation, weak management planning, high cost of interest and ineffective utilization of the available resources are some of the problem that NFC is facing.

1.10 Objectives of the Study

The main objective of the study is to study on the current practice of profit planning and control and its effectiveness in NFC. The other specific objectives of the study are as follows;

A. To examine the application and practices of PPC in NFC.
B. To analyze various functional budgets adopted by the NFC.
C. To asses the financial performances of NFC by using different financial ratios.

D. To analyze the budget variance.
E. To know about Break even sales and,
F. To provide suitable suggestions and recommendations based on the analysis for improving the NFC conditions.

1.11 Significance of the Study

This research work is the study on the current practice of Profit planning and control of NFC. This study will be significant in various ways for different stakeholders.

1. It explores the problems and potentialities of NFC.
2. It examines the application of PPC in the company.
3. It provides the necessary theoretical and contemporary situational conceptions to make appropriate decisions for NFC.
4. It will be useful to the potential managers, accountants, policymakers, loan investors and foreign donors etc.
5. It provides literature to the researcher who wants to carry further research in this field.

1.12 Limitations of the Study

Maximum efforts were given for not deviating from the facts and truth while presenting and analyzing the information. But certain limitations existed which were difficult to eliminate.

Following are its limitations of this study;

1. The proposed study is based on the data of five fiscal years covering 2058/059 to 2062/063.
2. The whole study is based on true response and the data provided by the NFC management.
3. Basically the study is based on secondary data but for the primary data general discussions with the management were also done.
4. The study was focused on the application of PPC in NFC.
5.

1.13 Scheme of the Study

The whole study has been divided into five chapters.

1. Introduction

This is the first chapter of the thesis writing. It dealed with the subject matter. It consisted of introduction, general background of the company, identification of the problem and significance of the study, objectives, limitations and scheme of the study.

2. Review of Literature

This is the second chapter of the study. It included review of the literature obtained during the library searches. Review of literature is an essential aspect of all studies. It is a way to discover what other research in the area of our problem has uncovered. This chapter included the meaning or profit planning and other related topics of the profit planning and control under the head of conceptual framework and review of major studies related to the PPC under the head of review of earlier studies.

3. Research Methodology

This is the third chapter of the study. It explained the methods used in the study. It included research design, sources of data, data collection technique, methods of presentation and analysis of data and general meaning of research methodology.

4. Presentation and Analysis of Data

This chapter included presentation and analysis of collected data by using various statistical and financial tools and major findings.

5. Summary, Conclusions and Recommendation

The fifth and final chapter is concerned with the suggestive framework, it dealt with the summary, conclusions and recommendations of the study.

CHAPTER – TWO
REVIEW OF LITERATURE

2.1 General view of profit and planning

The two-term profit and planning are the basic aspects of profit planning and control. Thus before entering into the depth of profit planning and control this two terms need to be defined. The dictionary meaning of the term "profit" is "money" which is earned in trade through production and selling goods and services. Profit generally means a difference between revenue generation and the cost incurred or it can also be expressed as the excess of income over expenditure during a particular period of time. Profit in business refers to the monetary difference between the cost of producing and marketing goods or services and the price subsequently received for those goods or services. In economics profit may be defined as the net income of a business after all other costs have been deducted. As for entrepreneurship, profit is a reward for risk taking. According to a labor leader; “profit is a measure of how efficiently labor has produced and that it provides a base or negotiating a wage increase.” Investors will view it as a gauge of the return on his/her money.

“Profit is the primary measure of business success in any economy. Profit do not just happen it is managed. It is the ultimate objectives of management to maximize profits over the long term consistent with its social responsibilities.”(Lynch and Williamson, 1984:99)

“No company can survive long without profit. Profit is the ultimate measure of its effectiveness, and in a capitalist society, there is no future for public enterprise that always incurs losses. Profit is a signal for the allocation of resources and a yardstick for judging managerial efficiencies.”(Kulkarni; 1992:100)

Profit just does not happen, profits are managed. Profit is the primarily measure of business in any economy. It is therefore very important to understand the concept of profit. The great Greek philosopher Aristotle (384 B.C- 322B.C) once says, “Watch the costs and the profit will take care of themselves.”

F.B Hawley says, "Profit is reward for risk taking in business. Schumpeter opines that an entrepreneur earns profit as reward for introducing innovation. J.M Keynes holds the view that profit results from the favorable movement of general price levels. In view of Mrs. John Robinson and chamberlain, the greater the degree of monopoly power the greater will be profits made by the entrepreneur (Joshi, 2052: 170).

The term planning means deciding in advance what is to be done in future. Planning starts from forecasting and predetermination of future events. Planning is the first function of management. It is the process of developing enterprises objectives and selecting future courses of action to accomplish them. It is performed continuously because the passage of time demands both replanning and making new plans. Moreover, current feedback often necessities newly planned actions to a) correct performances deficiencies b) cope with unanticipated events that are unfavorable and c) taking advantages of new developments.

It is a decision in advance what to do, when to do, how to do and who will do a particular task hence planning is thinking before doing. It involves selecting of objectives and strategies, policies, programme and produce for achieving them.”(Shrestha; 1996:315)

Planning is the first essence of management and all other functions are performed within the framework of planning. Planning means deciding in advance what is to be done in future. The primary purpose of planning in the business is to increase the chance of making profit. The budget is the primary operation-planning document. Committed performance budgets are called profit plan. Each manager and sub-ordinates has the authority in varying degrees to make the decisions the result of which will nearly accomplish of better his budgetary targets.”(Kenneth et al; p27)

Planning is defining goals, establishing strategy for achieving these goals and developing a comprehensive hierarchy of plans (sub plans) to integrate and co-ordinate activities. It is concerned with both ends (what is to be done) and means (how is to be done). (Robins and coulter; 1998; 9)

Planning is the specific process of setting goals and developing ways to reach them. Stated another way planning represents the firm effort to predict future events and be prepared to deal with them. (J Hampton; 2001: 133)

Planning is the process of developing enterprise objectives and selecting a future course of action to accomplish them. It includes (a) establishing enterprise objectives, (b) developing premises about the environment in which they are to be accomplished, (c) selecting a course of action for accomplishing the objectives, (d) initiating activities necessary to translate plans into action and (e) current replanning to correct deficiencies. (Welsch, Hilton and Gordon; 2000: 3)

2.2 Fundamental concept of profit planning and control

In modern-day businesses except in very small companies, it is virtually impossible for the top manager to have firsthand knowledge of all the relevant factors operating throughout a business. Nor can a single lower-level manager be expected to have the range of knowledge, experience and competence to make all the decisions for the large segments of a company, either as a source of reliable information or as a participant in decision-making. The quality of the judgments of the total management effort will continue to distinguish the better-managed and more successful companies. Profit planning and control is the tool that is used to increase significantly the effectiveness of a management and to place managerial judgments on a more objective and informed foundation.

Managing in fact implies co-ordination and control of the total enterprise efforts to achieve the organizational objectives. The process of managing is facilitated when management charts its course of action in advance. The function of management includes decision-making facilitated by various managerial techniques, procedures and by utilizing the individual and group efforts in a co-coordinated and rational way. Profit planning is one of the systematic approaches for attaining effective management performance.

Profit planning is a 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. The profit planning control means the development and acceptance of objectives and goals and moving an organization efficiently to achieve the objectives and goals. It is a tool that may be used by the management in planning the future course of action and in controlling the actual performance.

Profit planning is merely a tool of management; it is not an end of management or substitute of management. It is strictly an internal affair; it should not be made public. Profit planning and control provide guidelines to management and it acts as signal light for the management and enables the management to correct its policy.

Koontz and O' Donnel have given emphasis on planning and control function of management. The role of management on profit planning and control has been defined and the assumption that management can plan and control long term destiny of an organization through perfect decision making process. In favor of planning and control economist and the management experts have said that planning means prosperity and unplanned means happenstance. So, a modern management expert has given more importance to profit planning and control. Profit planning and control has been regarded as a basis for perfect decision-making.

Profit planning and control also known as comprehensive profit planning and control is a new term in the literature of business though it is a new term but it is not a new concept in the management. Comprehensive profit planning and control or PPC on other terms are business budgeting, managerial budgeting and budgeting. It is an integral part of management.

Profit plan is a financial and narrative expression of the expected results from the planning decisions. It is called the profit plan (or the budget) because it explicitly states the goals in terms of time expectations and expected financial results (return on investment, profit, and cost) for each major segments of the entity. Typical profit plans establish the content and format of the internal –control reports with respect to operations, inputs, outputs and financial position developed by the entity for monthly performance reporting to the various levels of management. (Welsch, Hilton and Gordon; 2000:34)

Profit planning in fact is a managerial technique and is such a written plan in which all aspects of business organization with respect to 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 plan is a pre-determined detailed of plan action developed and distributed as guide to current operation and as a partial basis for the subsequent evaluation of performance. Thus, we can say that profit plan is a tool, which may be used by management in planning the future course action and in controlling the actual performance. (Gupta; 1992:522)

The fundamental concept of PPC includes the underlying activities of tasks that must generally be carried out to attain maximum usefulness from PPC.

A management process that includes planning, organizing, staffing, leading and controlling

A managerial commitment to effective management participation by all level in the entity.

An organization structure that clearly specifies assignments of management authority and responsibility at all organization levels.

A management planning process.

A management control process.

A continuous and consistent coordination of all the management functions.

Continuous feed forward, feedback, follow-up and replanning through defined communication channels (both downward and upward).

A strategic profit plan.

A tactical plan.

A responsibility accounting system.

A continuous use of the exception principle.

A behavioral management program.

2.3 Basic elements of profit planning and control:

The basic elements of profit planning are as follows:

- Comprehensive and co-ordinate plan: The profit planning considers all activities and operations of an organization. The budgets prepared by different departments inside an organization are compiled. So, before preparing a profit planning firstly all the budgets prepared by departments have to be compiled to form comprehensive profit planning.
- It is expressed in financial terms: All activities covered by budgets are related with funds. Therefore the budget has to be expressed in money units i.e. in rupees, dollars, pounds etc.
- Plan for firm's operating and resources of budget: It is a mechanization to plan for the firm's all operations or activities. The two aspects of every operation are revenue and expenses. The budgets must plan for quantity, revenue and expenses related to specific operations. Planning should not be done for revenue and expenses only. The plan should be made to carry out the operations. The planning for resources will include planning assets and sources of funds.
- Plan for specific periods: Time dimension must be added in a budget. A budget is meaningful only when it is related to a specific time. The budget estimates will be relevant only for some specific period.

2.4 Foundation for PPC:

An enterprise has to take some major steps to establish a sound foundation for initiating a profit planning and control program. These steps are as follows;(Welsch, Gordon and Hilton; 2000:59)

Step1: there must be strong commitments by the top management to the broad concept of profit planning and control and a sophisticated understanding of its implications and operations.

Step2: the characteristics of the enterprise and the environment in which it operates – including the controllable and non-controllable variables- must be identified and evaluated so that relevant decisions may be made about the characteristics of a profit planning and control program that would be effective and practical.

Step3: there should be an evaluation of the organizational structure and assignment of managerial responsibilities and implementation of changes deemed necessary for effective planning and control.

Step4: there must be an evaluation and reorganization of the accounting system to ensure that it is tailored to the organizational responsibilities so that it can provide data particularly useful for planning and control purposes.

Step5: a policy determination must be made about the time dimensions to be used for profit planning and control purposes. (i.e. long range, medium range and short range)

Step6: a program of budget education should be developed to inform management at all levels about (a) the purposes of the program; (b) the manner in which it will operates, including the basic management policies and guidelines for its administration; (c) the responsibility of each level of a management in the program; and (d) the ways in which the program can facilitate the performance of each manager's functions.

2.5 Activities Involved in PPC:

Profit planning has the ultimate objectives of attaining the optimum profit as indicated by many successful applications. The most reasonable approach to attain the optimum profit is to plan as a percentage of capital employed to produce them and to manage the enterprise with the objective of achieving the planned percentage. It is the heart of management with proper planning. Profit will not just happen thus every enterprise should be systematically planned for profit and control over them. Profit planning in fact is management technique and a profit plan is such a written plan in which objectives and goal established by the top management in respect of some future period plan of action development and distributed as a guide to current operations and as a partial basis for the subsequent evaluation. (Gupta; 1992:521)

The following are the activities involved in PPC;

i. Development and applications of broad and long range objectives of the enterprise.
ii. Specification of enterprise goals.
iii. Development of a storage long- range profit plan in broad terms.
iv. Specification of a tactical short- range profit plan detailed by assigned responsibilities (division, department and project).
v. Establishment of a system of periodic performance reports detailed by assigned responsibilities.
vi. Development of follow up procedures.

2.6 Application of PPC:

Some people say that comprehensive profit planning and control is applicable only to large and complex organizations. Comments like “comprehensive budgeting is a fine idea for must businesses, but ours is different,” or “it is impossible to project our revenues and expenses,” and so on. Such type of comments are common regarding non-manufacturing enterprises, service companies, financial institutions, hospitals certain retail business, construction companies, and real estate enterprises. To the contrary, profit planning and control can be adapted to any organization (profit or non-profit, service or manufacturing), regardless of size, special circumstances, or conditions. The fact that a company has peculiar circumstances or critical problems is frequently a good reason for the adoption of certain profit planning and control procedures. In respect to size, when operations are extensive enough to require more than one or two supervisory personnel, there is a need of profit planning and control applications. The smallest company certainly has different needs in this respect than a large one. As with accounting, a single profit planning and control system that is appropriate for all enterprise cannot be designed. A profit planning and control system must be tailored to fit the particular enterprise, and it must be continually adapted ad the enterprise and its environment change.

2.7 A behavioral problem in PPC:

Realistic expectations are the major behavior problem in profit planning and control. In profit planning and control, management must be realistic and avoid being either unduly conservative or irrationally optimistic. For profit planning and control purposes, enterprise objectives and specific budgets goals should represent realistic expectations. To be realistic, expectations must be related 1) to their specific time dimension and 2) to a projected external and internal environment that will prevail during that time span. Goals that are set so high which are practically impossible to attain will discourage serious efforts to reach them. On the next hand, the goals set so low that need no efforts will provide no motivation. In order to constitute realistic expectations enterprise objectives and specific goals must represent a real challenge to managers and to operational units. The top management of the enterprise has the direct responsibility for defining the level of challenge that is represented by realistic expectations.

The development of realistic budgets goals, and the efforts required to attain them, entail significant behavioral implications. The budget goals should be established on a participative basis and implemented in ways that provide positive reinforcements rather than negative reinforcements. The attitudes like “can’t do” and “won’t do” have to consider by the management. “Can’t do” means more attention needs to be given to employee training and facilities. “Won’t do,” means the consequences of “doing it” should be reevaluated (positive rewards, challenges, pride, status etc.). The definitions of realistic expectations in a given enterprise are related to many variables, such as size of the enterprise, characteristics, maturity of the enterprise, sophistication of the management, nature of operations and behavioral management.

A particularly damaging effect of budgetary pressure results people to feel as though they have failed in meeting the budgetary goals. Such perceived failure result in loss of interest in work, lower personal standards for achievements, loss of confidence, fear of new tasks, lack of co-operation, and development of a critical attitude toward others.

In a study of sixteen manufacturing companies, Kenis reported that budgets goals that are “too tight” have negative effects on managers job satisfaction, budgetary performance and cost efficiency as compared with managers who reported having “tight but attainable” budgetary standards. Moreover, “too tight” budgets caused significant job tension. (Welsch, Hilton and Gordon; 2000:55)

The management should always be sensitive to the behavioral implications of budgetary pressure when implementing a PPC program.

2.8 Importance of PPC: -

A profit planning and control program helps the management perform its planning function by developing a strategic and tactical profit plan. It helps management perform its control function by providing realistic goals and standards. It emphasized on developing positive reinforcement, improving motivation, developing goals, coping with the effects of budgetary pressure, resolving budget padding problems and using budgets for control.

The following points show the importance of PPC;

1. It forces early consideration of basic policies.
2. It requires adequate and sound organization structure; that is, there must be a definite assignment of responsibility for each function of the enterprise.
3. It compels all members of management, from the top down, to participate in the establishment of goals and plans.
4. It compels departmental managers to make plans in harmony with the plans of other departments and of the entire enterprise.
5. It requires adequate and appropriate historical accounting data.
6. It requires that management put down in figures what is necessary for satisfactory performance.
7. It compels management to plan for the most economical use of labor, material and capital.
8. It instills at all level of management the habit of timely, careful, and adequate consideration of the relevant factors before reaching important decisions.
9. It reduces cost by increasing the span of control because fewer supervisors are needed.
10. It frees executives from many day-to-day internal problems through predetermined policies and clear- cut authority relationships. 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 the 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 a periodic self-analysis of the company.
15. It forces management to give adequate attention to the effect of general business conditions.

16. It aids in obtaining bank credit; banks commonly require projections of future operations and cash flows to support large loans.
17. It checks progress or lack of progress toward the objectives of the enterprise.
18. It forces recognition and corrective action (including rewards).
19. It rewards high performance and seeks to correct unfavorable performance.
20. It forces management to consider expected future trends and conditions.

2.9 Problems of PPC:

Although PPC has lot of importance and usefulness it is not a full proof concept. It has some problems.

The following are the major problems of PPC;

1. It is difficult, if not impossible, to estimate revenues and expenses realistically.
2. Management has no interest in all the estimates and schedules.
3. It is not realistic to write out the distribution of the 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 behavioral problems.
7. It places the management in a straitjacket.
8. It adds a level of complexity that is not needed.
9. It is too costly, aside from management time.
10. The managers, supervisors and other employees hate budgets.

2.10 Critical features or limitations of PPC:

Apart from its importance and problems of PPC it has certain limitations that should be taken into consideration by the management.

The followings are the critical features of PPC;

1. The profit plan is based on estimates: The advantage and disadvantages of a profit-planning program depend to a large extent on the realism with which the basic estimates are made. Estimates must be based on all available facts and sound managerial judgment. Estimating sales and expenses cannot be and exact science;

however, numerous mathematical, statistical and other techniques can be applied to these problems to produce realistic results.

2. A profit planning and control program must be continually adapted to fit changing circumstances: A comprehensive budget program cannot be started and perfected in a short time. Profit planning and control techniques must continually be adapted, not only for each particular enterprise but for changing conditions within the enterprise. Continuous budget education is necessary, especially during the formative period.
3. Execution of a profit plan will not occur automatically: Profit plan will be effective only if all responsible executives exert continuous and aggressive efforts toward their accomplishment. All levels of management must understand the program, must be convinced of its relevance to their function, and must participate in its implementation in an appropriate way.
4. The profit plan is not a substitute for management: Profit planning cannot substitute for enlightened management. It is a system that can aid in performing the management process. The profit plan should be regarded not as a master, but as a servant. It is one of the best tools yet devised for advancing the affairs of a company and the individuals in their various spheres of managerial activity.

2.11 The profit planning and control process:

A PPC program includes more than the traditional idea of a periodic or master budget. Rather, it encompasses the application of a number of related management concepts through a variety of approaches, techniques sand sequential steps. It necessarily integrates the planning, leading and control functions of management. The term comprehensive means 1) the application of the broad concept of profit planning and control to all phases of operation in an enterprise and 2) the application of a total systems approach.

The sequential phases of PPC are as follows ;(Welsch, Hilton and Gordon; 2000:73)

1. Identification and evaluation of external relevant variables.
2. Developing and revising of broad objectives of the business.
3. Developing specific enterprise goals.
4. Specifying major enterprise strategy to attain the objectives and goals.
5. Specifying planning premises for managers.
6. Development and evaluation of project plans.
7. Developing strategic profit plan for 3, 5 or 10 years.
8. Developing tactical profit plan for upcoming year.

9. Implementing profit plan throughout the budget year.
10. Preparing monthly performance reports by responsibility and
11. Providing feedback, taking corrective action, and replanning.

From serial numbers 1 to 8 it is related to the planning function of management. The serial number 9 is related to the leading and 10 and 11 is controlling function of management. Executive management level is responsible for carrying out the activities of serial numbers 1 to 5. The activities from serial numbers 6 to 8 are carried by middle management level. The activities of serial numbers 9 to 11 are responsible for all management levels. This PPC process is repeated each budget year. All the basic steps in the planning phase should be reviewed and evaluated annually.

2.12 Components of PPC:

A PPC program should have all its components that are required to fulfill the objectives, which are supposed to be fulfilled by the PPC program.

The following are the components of PPC program ;(Welsch, Hilton and Gordon; 74:2000)

A. The substantive plan:
   I. Broad objectives of the enterprise
   II. Specific enterprise goals
   III. Enterprise strategies
   IV. Executive management planning instruction (planning premises)

B. The financial plan:
   I. Strategic long-range profit plan
      a) Sales, cost and profit projections
      b) Major projects and capital additions
      c) Cash flow and financing
      d) Personnel requirements
   II. Tactical short – range (annual) profit plan:
      a. Operating plan:
         Planned income statement
            Sales plan
            Production (or merchandise purchases) plan
            Administration expense budget
            Distribution expense budget

Appropriation – type budgets (e.g., research and development, promotion, advertising)

b. Financial position plan

Planned balance sheet

Assets

Liabilities

Owners' equity

c. Cash flow plan

C. Variable expenses budgets:
   Output – expense formulas
D. Supplementary Data:
   (e.g., cost- volume profit analysis, Ratio analyses)
E. Performance Reports (including any special reports)- each month – end and as needed.
F. Follow – up, corrective action and replanning reports

The substantive plan is represented by the broad objectives, strategies, specific plans, and programs of the organization, and by the concurrent commitment of management to long – range accomplishment of these objectives and plans. The substantive plan may be characterized as the "prose part" of the plan rather than the "numbers part" of the plan. It gives the foundation for the financial plan.

In contrast, the financial plan quantifies the planned financial results of implementing managerial objectives, planned strategies, plans and policies. The financial plan then represents a translation into financial terms of objectives, goals, and strategies of management for specific periods of time.

2.13 Development of the broad objectives of the enterprise:

Development of the broad objectives of the enterprise should be based on realistic evaluation of the relevant and an assessment of the strength and weakness of the organization. The executive management can specify or restate this phase of the profit planning and control process.

The statement of broad objectives should express the mission vision and ethical character of the enterprise. Its purpose is to provide enterprise identify continuity of purpose.

The broad objectives of an enterprise should be as follows:

1. To define the purpose of the company.
2. To clarify the philosophy character of the company.
3. To create a particular "climate" within the business.
4. To set down a guide for managers.

The statement of broad objectives normally should not specify quantitative goals. Rather it should be a narrative expression of the purpose objectives and philosophical character of the business. It should represent the basic foundation or building block upon which to develop and positively reinforce pride in the company by management, other employees, owners, customers and other enterprises that have commercial contacts with it." (Welsch, 2000: 75-76)

2.14 Development of specific goals for the enterprise:

The purpose of the “goals phase” of the PPC process is to bring the statement of broad objectives into sharper focus and to move from the realm of general information to more specific planning information. It provides both narrative and quantitative goals that are definite and measurable. These are specific goals that relate to the enterprise as a whole and to the major responsibility centers. Executive management as the second component of the substantive plan for the upcoming budget year should develop these goals. Executive management should exercise leadership in this planning phase so that there will be a realistic and clearly articulated framework within which operations will be conducted toward common goals. Moreover, the specific goals provide a basis for performance measurement. These broad, but specific, goals must be developed for both the strategic long- range plans and the tactical short – range plans.

2.15 Development and evaluation of company strategies:

Company strategies are the basic thrusts, ways, and the tactics that will be used to attain planned objectives and goals. A particular strategy may be short- term or long- term. The purpose of developing and disseminating enterprise strategies is to find the best alternatives for attaining the planned broad objectives and specific goals. Executive management must be creative and directly involved in the development of new strategies and in the adaptation of currently ongoing strategies in harmony with the relevant variables with which management must cope. In the development of basic strategies for the enterprise, executive management must focus on identification of the critical areas that influence the long- range success of the enterprise. Critical areas should be pinpointed through evaluation of relevant variables. Although strategy formulation is of continual concern to executive management, periodic reassessment of the strategies is essential in light of a careful analysis of all relevant variables and their probable future impact on the enterprise.

2.16 Strategic and tactical profit planning:

Planning horizon refers to the period of time into the future for which the management should plan. It refers to life span of the plan. For all enterprise many planning horizon are needed to maintain the continuity of planning activities. For effective implementation of planning, management of an enterprise must establish a definite time dimension types of activities.

Long term planning is, of course, different from short term planning. Any goal that is to be achieved will require at least a couple of steps to accomplish the objective are to figure out how to make those steps? Long term and short term are relative, just like hot and cold. Just is has to be remembered that the long-term part covers a greater time span than the short-term parts. Generally speaking, short term planning is tactical planning while long term planning is strategic planning.

Companies, large and small, need strategic and tactical plans to accomplish their goals. Without goals and strategy and planning, no company can grow in a meaningful way, profit-planning application differs with the types and sizes of organizations and time period. While preparing a systematic and comprehensive profit plan, two dimensions are considered.

2.16.1 Strategic (long range) profit plan:

The name itself suggests that strategic profit plan is usually for longer period of time. It takes the time horizon of three or more years. When a company plans strategically, it is focusing on identifying the most effective and profitable way to run the business in the long- term. These include deciding on the number of collections that the company can profitably run in a year, the sort of production capacity that will be required, the most profitable way to source materials, whether own production or sub contract production should be used, and the most effective distribution policy. The long- range plan covers all the key areas anticipated activity; sales expenses, research and development, capital expenditure, cash, profit and return on investment. The purpose of the long – range plan forecast is to evaluate and determine what the future financial needs will be for an individual product or an entire program for the next three to five years. Based on information from product management, the forecast projects a products anticipated financial performance and the impact it will have on existing corporate resources.

To be successful, a long – range plan must have the following objectives:

Incorporate the department's development and support expense for new products, features and cost reduction plans.

Reviewing of plant capacity, personnel requirement in light of start – up products, and existing plant capitalization.

Identifying future capital requirement for development departments, the manufacturing process, and support departments such as MIS and the building structure.

Reflecting changes in cash requirements for salaries, material, capital, e.t.c.

Strategic planning involves (Policastro; n.d: n.p)

- Assessing the current business environment.
- Defining your company's purpose mission.
- Deciding what you want the business to look like in three to five years.
- Recognizing your company's

- Strength
- Opportunities
- Threats

Mapping out a course to take the company from its current to its desired position.

Strategic planning is necessary for those companies where only if companies want to stay in business and prosper. Good financial control alone is not enough to ensure business success. In addition to a budget, there need long-term goals to determine the future direction of the company.

2.16.2 Tactical (short range) profit plan:

Tactical profit plan are prepared for short period of time usually for one year. The short – range plan shows the primarily annual results, the details by months, responsibility and products. At the end of the month or quarter through out the year, the sales plan is studied and revised by adding a period in the future and by dropping the period just ended thus, tactical sales plan are usually subject to review and revision on a quarterly basis. The short – term sales plan includes a detail plan for each major products and grouping of minor products.

In contrast, tactical planning focuses on the medium term, which can be anything from six months to 18 months depending upon the type of company concerned and takes as its starting point an outline demand plan. This is a plan that includes a high – level estimate of demand by market, as well as the number of collections and\or styles that the company wishes to produce over a particular time period. When planning tactically, companies are typically deciding which raw materials suppliers to use, which styles to produce in which production units, which goods to sub – contract and which goods to stock in which distribution centers.

The objectives of tactical plan are as follows;

Establishing overhead rates based on fixed and variable type of expenses to be applied to various types of labor and material categories.

To determine transfer prices for equipment and services. Equipment is transferred to the books of the marketing organization that is responsible for marketing the product.

To issue budgets for operating departments.

To identify specific standard cost variances for material prices, material usage, labor efficiency and utilization, and time standard changes.

To detail manpower by activity.

To calculate inventory levels and objectives.

To identify specific capital requirements and associated expense.

To prepare detailed plans for products introductions, cost profiles, and phase – out of replaced products.

2.17 Implementation of Profit Plans

"Implementation of management plans that have been developed and approved in the 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 facts involved in management leadership. However, a comprehensive profit planning and control program may aid substantially in performing this function. Plans, strategies and policies developed through significant participation establish the 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 clear understanding of their responsibility and expected level of performance. Profit plans cannot manage the business, and they must not constrain management in taking advantage of opportunities, even those not anticipated in the profit plans."(Welsch; 2000:84)

2.18 Use of Periodic Performance Reports

As profit plans are being implemented during the period of time specified in the tactical plan, periodic performance reports are needed. Performance reports are prepared by the accounting department on a monthly basis. Some special performance reports are prepared more often on an "as needed" basis. These performance reports a) compare actual performance with planned performance and b) show each difference as a favorable or unfavorable performance variation.

A clear distinction must be made between external and internal financial reports. Internal reports can be further classified as a) statistical reports that give the basic quantitative internal statistics about the operations of the enterprise; b) special management reports about nonrecurring and special problems; and c) periodic performances reports. The periodic performance 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. On the other hand, daily, weekly, or even monthly sales reports may serve as a basis for effective and timely action. Actual performance statistics alone do not indicate high or low performance. Actual performance must be compared with realistic goals or standards in order to evaluate performance.

2.19 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 actions. It is important to distinguish between cause and effect. The performances variations are effects; the management must determine the underlying causes. The identification of causes is primarily a responsibility of line management. Analysis to determine the underlying causes of both favorable and unfavorable performance variances should be given immediate priority. In the case of unfavorable performance variances, after identifying the basic causes, as opposed to the results, an alternative for corrective action must be selected. Then the corrective action must be implemented.

In the case of favorable performance variances, the underlying causes should also be identified. Favorable performance reports seldom require corrective action. Rather, the underlying causes of favorable variances often provide valuable information for improving efficiency and for developing positive reinforcement to the less- successful operations and employees. Finally there should be a special “follow – up of the prior follow- up actions”.

2.20 Line and Staff Responsibilities Related to PPC

The chief executive has ultimate responsibility for profit planning and control. However, there must be a concomitant assignment of responsibilities to line and staff executives. Each line executive must be assigned center responsibility for 1) operational decision inputs into the plan, (2) implementation, and 3) control. The profit planning and control program must be established upon a firm foundation of line responsibility and commitment to develop, implement, and attain the role of each center in the enterprise objectives and goals. In contrast, the staff responsibilities for a PPC program include (1) designing and improving the system, (2) supervising and coordinating the operation of the system, (3) providing expert technical assistance, analyses, and advice to the line managers, and (4) developing and distributing performance reports.

The chief financial officer should be assigned overall staff responsibility for the profit planning and control program. In view of the importance of an effective profit planning and control program, the position on the staff of the individual responsible for the program should be such that it will command attention and respect throughout the firm. Staff executives should not be assigned the responsibility for "enforcing the budget".

2.21 PPC Policies Manual

A profit planning and control manual is normally desirable to enhance communication, specify procedures, and provide reasonable stability in the operation of the system.

A profit planning and control manual should include the following: (Welsch; 2000:92-93)

1) A statement of objectives of the PPC program.
2) Procedures to be followed in developing profit plans:
    a. Instructions and forms to be used
    b. Procedures for making planning decisions:
        i. Operating executives
        ii. Staff executives
        iii. Top – management budget committee

3 A profit planning and control calendar that specifies completion dates for each part of the profit plan and for the submission of reports

4 Distribution instructions for profit plan schedules

5 Instructions and procedures with respect to performance reports

   a. Responsibility and procedures for preparation of reports:

      i. Actual results

      ii. Budgeted data and variations

      iii. Analysis of variances

   b. Form, content of and procedures for performance reports

   c. Distribution instructions for performance reports

6 Procedures for taking corrective action on variances:

   a. Unfavorable variances

   b. Favorable variances

7 Follow **–** up and replanning procedures.

2.22 Budgeting a Tool of Profit Planning and Control

Profit planning is accomplished through the preparation of various budgets and by the subsequent evaluation of how actual operating and other results compare with planned results.

"A budget is a comprehensive and coordinated plan, expressed in financial terms, for the operations and resources of an enterprise for some specific period in the future."(Pandey; 1992 240-241)

"A budget is a detailed, quantitative plan to guide its operation in the near future. The concept of a comprehensive budget covers its use in planning, organizing and controlling all the financial and operating activities of the firm in the forthcoming period."(Lynch and Williamson; 1991:142)

A budget is the plan of the firm's expectations in the future. Planning involves the control and manipulation of relevant variables- controllable and non-controllable, and reduces the impact of uncertainty. A budget expresses the plan in formal terms and helps to realize the firm's expectations. It is a comprehensive plan in the sense that all activities and operation are considered when it is prepared. It is a budget of the enterprise as a whole.

For the operational purposes, a budget is always quantified in financial terms. They are expressed in the money unit like rupees, dolor, or pound e.t.c. A budget is a mechanism to plan for the firms all operations or activities. The two aspects of every operation are: revenues and expenses. In a business organization, a budget represents an estimate of future costs and revenues. Budget is a plan that outlines an organization's financial and operational goals. So, a budget may be thought of as an action plan; planning a budget helps a business allocate resources, evaluate performance, and formulate plans. In other words a budget is a systematic plan for the utilization of manpower and material resources. While planning, a budget can occur at any time, for many businesses, planning a budget is an annual task, where the past year's budget is reviewed and budget projections are made for the next three or even five years.

The dictionary of small business defines "budget" as "a document that lists planned income and expense items along with the dollar value for each. A budget is most useful when, at a later date, actual transactions are compared to the budget for analysis and control of future decisions. (Hawthorne; n.p: n.d)

Budgets not only allow governments to plan spending, but also allow taxpayers to see exactly where and how their money is being spent. Governments and government's agencies use budgets only as a means of limiting spending. In contrast, most business organizations use budgets to focus attention on company operations and finances, not just to limit spending. Budgets highlight potential problems and advantages early, allowing management to take steps to avoid these problems or use the advantages wisely. Thus a budget is a tool that helps managers in both their planning and control functions. Budgets help managers with their control function not only by looking forward but also by looking backwards. Budgeting forces managers to think ahead to anticipate and prepare for changing conditions. The budgeting process makes planning and explicit management responsibility. Budgeted goals and performance are generally a better basis for judging actual results than its past performance. A budget provides a good way of directing business towards goals in terms of both expenses and revenues. It gives a constant overview of costs incurred and revenues raised which then allows for the micro control of both of those elements.

A budget is a quantitative statement of an expected level of future performance against which actual performance is measured. The difference between expected performance and actual performance is known as variance. If variance is unfavorable, particularly if it is part of a growing trend, remedial action must be taken before the business is compromised. One of the main reason that business fail is that management is either unaware of growing financial problems or if appropriate remedial action is not taken.

2.23 Purpose of Budgeting

Simply stated, the process of preparing and using budgets to achieve management objectives is called budgeting. It is a management technique or, in fact it is a way of managing.

The major purposes of budgets or budgeting are: (Pandey; 1992:257)

a. To state the firm's expectations in clear; formal terms to avoid confusion and to facilitate their attainability.

b. To communicate expectations to al concerned with the management of the firm so that they are understood, supported and implemented.

c. To provide a detailed plan of action for reducing uncertainty and for the proper direction of individual and group efforts to achieve goals.

d. To coordinate the activities and efforts in such a way that the use of resources is maximized.

e. To provide a means of measuring and controlling the performance of individuals and units and to supply information on the basis of which the necessary corrective action can be taken.

2.24 Advantages of Budgeting

To reiterate, budgeting is a management tool; it is a way of managing. Many benefits are derived from budgeting, although it is a means not an end in itself. Budgeting is a feed – forward process; it makes an evaluation of the variables likely to affect future operations of the enterprise. It predicts future with reasonable precision and removes uncertainty to a greater extent. The following are some of the more significant advantages of budgeting: (Pandey; 1992: 259)

a. Budgeting compels management to plan for future. The budgeting process forces management to look ahead and become more effective and efficient in administering the business operations. It instills into managers the habit of evaluating carefully their problems and related variables before making any decisions.

b. Budgeting helps to coordinate, integrate and balance the efforts of various departments in the light of the overall objectives of the enterprise. This results in goal congruency and harmony among the departments.

c. Budgeting facilitates control by providing definite expectations in the planning phase that can be used as a frame of references for judging the subsequent performance.

d. Budgeting improves the quality of communication. The enterprise objectives, budget goals, plans, authority and responsibility and procedures to implement plans are clearly written and communicated through budgets to all individuals in the enterprise.

e. Budgeting helps to optimize the use of the firm's resources- capital and human; it aids in directing the total efforts of the firm into the most profitable channels.

f. Budgeting increases the morale and thus, the productivity of the employees by seeking their meaningful participation in the formulation of plans and policies, bringing a harmony between individual goals and the enterprise objectives and by providing incentives to perform more effectively.

g. Budgeting develops an atmosphere of profit – mindedness and cost –consciousness.

h. Budgeting permits to focus management attention on significant matters through budgetary reports; thus, it facilitates management by exception and thereby saves management time and energy considerably.

i. Budgeting measures efficiency, permits management self – evaluation and indicates the progress in attaining the enterprise objectives.

2.25 Essentials of Budgeting

A successful and sound budgeting system is based upon certain prerequisites. These prerequisites represent management attitude, organization structure and managerial approaches necessary for the effective and efficient application of the budgeting system. The following are some of the important essentials or fundamentals of a successful budgeting: (Pandey; 2000:244-245)

a. Top management support: A budgeting system will be an utter failure if it is not initiated and supported by top management. Top management must realize that budgeting is not merely an accounting device, but as an important management tool. Top management must: I) understand the nature and characteristics of budgeting; ii) be convinced that this particular approach to managing is preferable for their situation; iii) be willing to devote the effort required to make it operative; iv) support the programme in all its ramification; v) view the results of the planning process as performance commitments.

b. Clear and realistic goals: Budgeting is a means to achieve goals and objectives. Budgeting will not succeed if the goals to be achieved ore not clear; budget implementation will not be systematic. In the absence of goal clarity, employees will lack a proper direction; the efforts of management will be wasted. The enterprise objectives and budgets goals to be accomplished through budgeting should be reasonable and realistic; they should be capable of attainment. Budget goals should not be set at too high or too low a level.

c. Assignment of authority and responsibility: A sound organizational structure is essential for the success of the budgetary system. Authorities and responsibilities of each manager should be clearly identified and established. A sound organizational structure and a clear- cut assignment of authorities and responsibilities provide an effective means to achieve the enterprise objectives and budget goals in a coordinated and efficient manner. The budgetary system should be established in terms of the assigned authorities and responsibilities; the performance of each manager should be evaluated in terms of the assigned authorities and responsibilities.

d. Creation of responsibility centers: A small firm can possibly be managed by an individual or a small group of individual but a large firm cannot be supervised by an individual. For effective control a large firm is divided into managerial segments, departments or divisions. Each sub units has a certain activities to perform and its manager is assigned to specific authority and responsibility to carry out. Such sub-units are called responsibility centers.

e. Adaptations of the accounting system: The accounting system should be suitably adapted to facilitate the planning and control process; it should be structured around the areas of responsibility. A sound budgetary system needs the creation of a responsibility accounting system. A responsibility accounting system is primarily oriented towards the organizational responsibilities and is a means to achieve effective control. A cost accounting system has two primary aims; I) to measure the cost of production and ii) to furnish data for planning and control.

f. Full participation: Full participation of managers and their subordinates at all levels should be sought in developing the budgeting system. The participation should be meaningful and real. A meaningful participation creates a positive motivation. "Participation tends to increase commitment; commitment tends to heighten motivation; motivation which is job-oriented tends to make managers work harder and more and more productivity; and harder and more productive work by managers tends to enhance the company's prosperity; therefore, participation, is good."

g. Effective communication: Communication is the process of transmitting thought or information from on person to another. The basic purpose of communication is to bring mutual understanding between two or more persons. It is a device to bring people together in an enterprise. A sound budgeting system requires effective communication of enterprise objectives and budget goals and means of implementing budgets through the organization so that a unified effort may be directed to accomplish those objectives and goals. A comprehensive system of budgeting is not only based on a sound communication system, but also helps to improve the effectiveness of communication within as budget goals to various responsibility centers.

h. Budget education: For the success of budgeting, everyone in the enterprise should have the knowledge of budgeting, confidence in the budgeting system and should be committed and involved to it. The employees of the enterprise must be educated about the nature, characteristics, value, and methods of budgeting.

i. Flexibility: The budgeting system should be flexible enough to take advantage of all opportunities that arise from time to time and are not covered by the budget. A rigidly administered budgeting programme dominates the business and imposes “strait jackets” in implementing the budget plans.

2.26 Characteristics of budget

The main characteristics of a budget are:

a. It is prepared in advance and is derived from the long- term strategy of the organization.

b. It relates to future period for which objectives or goals have already been laid down.

c. It is expressed in quantitative form, physical or monetary units, or both. Detailed plan in quantitative terms: a budget is a detailed plan, expressed in quantitative terms, that specifies how resources will be acquired and used during a given period of time. A budget is written plan for a specific period of time, typically a year. It is a quantitative expression for a set time period of a proposed future plan of action by management. A financial plan of the resources needed to carry out tasks and meet financial goals is the budget.

d. Serves as a benchmark: A budget is a tool used in planning, communicating and coordinating the plans and views of various managers within an organization, allocating limited resources among various programs and projects, controlling operations by serving as a standard against which actual results can be compared and evaluating performance.

Different types of budgets are prepared for different purposed e.g. sales budget, production budget, administrative expense budget, raw material budget etc. All these sectional budgets are afterwards integrated into a master budget, which represents an overall plan of the organization.

2.27 Classification of Budgets

Budgets can be classified into different categories on the basis of time, function, or flexibility. The different budgets covered under each category are shown as follows:

2.27.1 On the basis of time factor:

a. Short term Budget: This budget is usually for a period of a year or two, or less than a year such as half yearly or quarterly. Tactical planning focuses on the medium term, which can be anything from 6 to 18 months depending upon the type of company concerned and takes as its starting point an outline demand plan.

b. Long term Budget: It is usually for five to ten years. Strategic budget is long-term budget that are usually focused for long term perspectives.

2.27.2 On the basis of flexibility:

a. Fixed Budget: Fixed budget targets are rigidly fixed and usually prepared for 1 to 3 months period. A fixed budget is based on a fixed volume of activity. It may lose its effectiveness in planning and controlling if the actual capacity utilization is different from what was planned for any particular unit of time e.g., month or a quarter.

b. Flexible Budget: In this, type of budget are figured in the form of cost and expense budget acceptable to any given set of operating condition with in any month of a fiscal year. The flexible budget is more useful for changing levels of activity as it considers fixed and variable costs separately. Fixed costs remain unchanged over a certain range of output. Such costs change when there is a change in capacity level. It portrays costs, revenues, and profits at the various level of budgeted activity. The flexible budget is also referred to as the variable budget, sliding scale budget, expense control budget, and formula budget. It is completely separate from the profit plan but it is used to complement it. Flexible budget give realistic information about expenses that make it possible to compute budget amounts for various output volumes or rates of activity in each responsibility center. The variable costs vary directly in proportion with change in output.

2.27.3 On the basis of Functions:

On the basis of functions budgets are classified into different functional budgets, which are integrated with master budget. These budgets are interdependent.

They are as follows:

a. Sales budget: Nearly all other parts of master budget are dependent in some way on the sales budget. It is the foundation on which all other budgets are built. The budget is based on projected sales to be achieved in a budget period. A sales budget is the projection of what the company can sell, upon which all other planning is based.

b. Selling and Distribution Cost Budget: This budget includes all the expenses relating to selling, advertising, delivery of goods to customers etc. It is better if such costs are analyzed according to products, types of customers, territories and the sales departments. The preparation of the budget would depend on analysis of the market situation by the management, advertising policies, research programmes and the fixed and variable elements.

c. Production Budget: A production budget is prepared in relation to sales budget. This budget is expressed in quantities only and is the responsibility of the production manager. The objective is to ensure that production is sufficient to meet sales demand and that economic stock levels are maintained.

d. Production cost Budget: There are three elements of costs, namely direct material, direct labor, and overheads. Separate budgets for each of three elements have to be prepared. The direct materials budget has two components, a) Materials requirement budget, b) Materials procurement or purchase budget. The former deals with the total quantity of material required during the budget period, while the latter deals with the materials to be acquired from the market during the budget period.

e. Purchase Budget: This type of budget deals with the materials to be acquired from the market during budget period. The direct materials purchase budget is the responsibility of the purchasing manager. The objective is to purchase these materials at the right time at the planned purchase price. In addition, it is necessary to take into account the planned raw materials stock level.

f. Personnel Budget: It refers to maximum utilization of manpower in productive activities. Once production needs are known, the direct labor budget must be prepared. The direct labor budget is the responsibility of the respective managers of departments. The direct labor budget is typically expressed in both direct labor hours and in amount.

g. Research Budget: It is relation with new product and improvement of quality and quantity of the products. Research and development costs are to be incurred so that the products or the methods of the concern do not become out of date. The research and development budget is a forecast of all such expenses.

h. Overhead Budget/ Office and Administration Budget: This budget mentions all administration and staffing cost. This budget covers the administrative expenses including the salaries of administrative and managerial staff. The overhead must also be analyzed according to whether they are controllable or non- controllable for the purpose of cost control.

i. Cash Budget: The objectives of the cash budget is to ensure that sufficient cash is available at all times to meet the level of operations that are outlined in various budgets. The cash budget is a plan of future cash receipt and payment. The statement showing the estimated cash income (cash inflow) and cash expenditure (cash outflow) over a projected time period is known as cash budget. Cash budgets can help a firm to avoid cash balances that are surpluses to its requirements or cash deficiencies can be identified in advance.

j. Capital Budget: Capital budget is for the acquisition of long-term assets. This budget provides guidance as to the amount of capital that may be needed for procurement of capital assets during the budget period. It helps in the process of planning and controlling of the long-term and short-term expenditure for expansion, replacement and contraction of fixed assets. Capital budgeting is useful to earn future profit and reduce future costs.

k. Master Budget: The master budget is a summary of all phases of a company's plans and goals for the future. It sets specific targets for sales, production, distribution, and financing activities. The master budget quantifies targets for sales, cost-driver activity, purchases, production, net income, cash position and any other activities that management specifies.

2.28 Master Budget – Budgeting for Short Range

Although the smallest of small business may be able to compile a budget for the business in one document but other business commonly split up the budget into areas so that it is more manageable. Such areas will include sales, production, marketing and so on. These all areas compiled in a single to create the master budget. Thus, the master budget is a network consisting of many separate budgets that are interdependent.

Short range budgeting provides managers with a means for comparing actual operational with budgeted figures and reporting the result of these comparisons to higher-level managers. Master Budget in simple terms is the financial plan for the coming year or other planning period. It is a comprehensive profit plan that covers all phases of an organizations operation. The master budget is the most detailed budget that is coordinated across the whole organization to meet operating and financial goals. The master budget interrelationships can be studied in following figure:

2.29 Constituents of PPC

2.29.1 The Sales Budget

Sales budget is the corner stone of profit planning. It is the starting point in preparing the comprehensive profit planning. All the other components of PPC like production, purchases, inventories, and expenses depend on it. It is a forecasting of total sales divided into groups of products, salesman and geographical location. A comprehensive sales budget, sometimes referred to as a market penetration plan, comprises all sales activities. Generally, the sales budget is accompanied by a computation of expected cash receipts for the forthcoming budget period. This computation is needed to assist in preparing the cash budget for the year. Expected cash receipts are composed of collections on sales made to customers in prior periods, plus collections on sales made in the current budget period. The sales budget shows the quantities of each product that the company plans to sell and the intended selling price. It provides the predictions of total revenue from which cash receipts from customers will be estimated. If the sales budget is not accurate, the other budget estimates will be unreliable. Thus sales budget is the corner stone of PPC. Sales budget is both ends and means of PPC.

2.29.1.1 Purpose of Sales Planning:

The primary purposes of sales plan are as follows :(Welsch, Gordon and Hilton; 2000: 172)

To reduce uncertainty about future revenues.

To incorporate management judgments and decisions into the planning process.

To provide necessary information for developing other elements of a comprehensive plan.

To facilitate management's control of sales activities.

2.29.1.2 Factors Consideration in Sales Planning:

Generally there are two factors to be taken into consideration while making sales plan a) external and b) internal factor. (Welsch, Gordon and Hilton; 2000: 188)

A. External environment

   i. General business conditions that may affect the company during the coming period.
   ii. Local business conditions expected to prevail.
   iii. The trend of population in the marketing area.
   iv. Probable inflation of deflation.
   v. Expected changes in the competitive situation.
   vi. Fashion of technological movements expected.

B. Internal environment

i. Changes in promotional policies.

ii. Changes in location and space.

iii. Changes in personnel policies.

iv. Changes in physical arrangement and merchandise layout.

v. Changes in price policy.

vi. Changes in credit policy.

2.29.1.3 Components of Comprehensive Sales Plan

Components	Strategic plan	Tactical plan
Management policies and assumptions	Broad and general	Detailed and specific for the year
Marketing plan (sales and services revenues)	Annual amounts; Major groups	Detailed by product and responsi-bility.
Advertising and promotion plan	General; by year	Detailed and specific for the year
Distribution (selling) expense plan	Total fixed and total Variable expenses; by year	Fixed and variable expenses; by Month and by responsibility.

2.29.1.4 Development of Sales Budget or Sales Plan

While developing sales budget different steps should be taken into consideration. These steps are as follows:

Setting up of foundation:

Setting up of objectives

Preparation of strategic or lay term plan

Development of strategies

Sales forecast:

Evaluation of relevant variable or alternative factors:

- Capacity of firm
- Raw material market
- Labor market
- Capital addition
- Nature of market
- Alternative sources of supply

Evaluation of alternatives:

- Price consideration
  - Increase in price
  - Decrease in price
  - Maintain status quo
- Product line consideration
  - Pull out the product
  - Push in the product
  - Maintain the product

Develop the strategic and tactical sales plan.

2.29.1.5 Sales planning vs. Sales forecasting

Sales planning and sales forecasting are different. They have distinctly different purposes. A forecast is not a plan; rather it is a statement and or quantified assessment of future conditions about a particular subject (e.g. Sales revenues) based on one or more explicit assumptions. A forecast should always state the assumptions upon which it is based. It may be accepted or rejected or modified by management. Therefore it is viewed as only one input into the development of a sales plan. A sales forecast is a technical projection of the potential customers demand for a specified time horizon and with specified underlying assumptions. A sales forecast is converted to a sales plan when management has brought to bear management judgment, planned strategies, commitments of resources, and the managerial commitment to aggressive actions to attain the sales goals. Forecasting may be short-term, intermediate term and long term.

Whereas sales plan incorporates management decisions that are based on the forecast, other inputs, and management judgments about such related items such as sales volume, prices, sales efforts, production, and financing. Sales plan is not conditional but sales forecast is conditional. Sales forecast is also a technical staff function.

The factors needed to be considered while forecasting sales are as follows:

Historical sales data analysis

Analysis of international socio-economic factors

Analysis of national socio-economic factors.

The difference between sales budget and sales forecast can be explained as follows: (Fago; 2004: 7)

Forecasts are merely well educated estimate 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

2.29.1.6 Strategic Vs Tactical Sales Plan

Long-range sales plan is known as strategic sales plan. Usually it is of 5 to 10 years. Long-term sales plan are developed in broad and general management policies and assumption 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.

Tactical sales plan is also called short-range sales plan. It is used for short time horizon generally for twelve months detailing the plan initially by quarters and by months for the first quarter. At the end of each month or quarter throughout the year, the sales plan is restudied and revised by adding a period in the future and by dropping the period just ended. Thus, tactical sales plan are usually subject to review and revision on a quarterly basis. 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 or jobs and in sales or dollars.

2.29.1.7 Methods of Sales Projection

A. Non mathematical method or personal judgment method (rule of thumb)

Sales force composite: This approach emphasizes the judgments and expertise of the sales force because it provides a series of evaluation and approvals. A high level of participation, from the bottom up, is emphasized.

Sales departments composite: this approach emphasizes the responsibility of the district or product sales manager rather than the individual sales person. This group collects ongoing information on socio-economic trend from sales territories and based on information gathered and historical data, prepares sales budget.

Chief executive Decision: Based upon historical data and other information submitted by sales department, the chief executive determines the sales figure.

B. Mathematical or Statistical Methods

Economic Rhythm Method

Co-relation coefficient Analysis or Cyclical Sequence Methods

Historical Analogical Method

C. Specific Purpose Method

   Industry analysis method

   Product line analysis method

   End use method

2.29.2 The Production Budget

Just after making the sales budget, another budget that has to be made is production budget. The production budget refers to the development of policies about optimum production level, use of production facilities and inventory levels. It is the second step of profit planning and control. Just as the sales budget provides plans for how much company can sell, the production budget accounts for how much it will cost to produce it- including the cost of raw materials, tools, labor, and overhead. It gives an answer to question like what is to be produced? When is to be produced? How is to be produced? Where is to be produced?

"Production means creation of utility on goods and services, which can be used to fulfill or to satisfy the demand or desire of the customer against some financial payment." Production budget means co-ordination process between sales, inventory and production. The main purpose of this budget is to maintain optimum balance between sales, production and inventory position of the firm.

Production unit is determined by using the following equation:

Production unit = planned sales +final inventory – initial inventory

2.29.2.1 Responsibility for Production Planning

1) Chief Executive: the responsibility of chief executive is to formulate objectives and policies of organization. Chief executive is responsible for translating completed marketing plan into a production program consistent with managerial policies and subject to certain constraints.

2) Sales manager: Production plan is based 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.

3) 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 personnel, plant capacity, raw materials and parts and technology.

4) Production supervisor: Production supervisors make a tactical production plan. He/she must know the standard rate of direct material and direct labor, production hours, strike, seasonal variation and other areas of tactical plan.

5) Administrative Manager: Administrative manager must appoint the required number of labor and personnel. He/She provides information on manpower planning.

6) Financial Manager: The financial manager provides historical data, standard rates and information on capital additional plan.

2.29.2.2 General Consideration in Production Planning

The production plan does not aim to set the precise amounts and timing of actual production during the budget period. Rather, the production budget represents the conversion of planned sales volume to planned production volume as a basis for planning the various aspects of the manufacturing function- plant capacity requirements, raw materials requirements, timing of purchases, labor requirements and costs, and factory overhead. In developing the production plan, the manufacturing executives are faced with the problem of balancing sales, inventories, and production so that the lowest possible overall cost results. Careful considerations of a number of subsidiary, yet significant, matters are essential.

Following consideration should be taken while developing the production budget: (Welsch; 1992:185)

Total production requirements (by products) for the budget period.

Inventory policies relative to levels of finished goods and work in process.

Plant capacity policies such as the limits of permissible departures from a stable production level throughout the year.

Adequacy of manufacturing facilities (expansion or contraction of plant capacity).

Availability of raw materials, purchased components, and labor.

The effect of the length of the processing time.

Economical lot size.

Timing of production throughout the budget period.

2.29.2.3 Production Policies

With respect to production planning, the planners must determine an optimum balance between sales, inventory, and production levels. The problem is complex; because of the three variables. If optimum balance is not achieved in planning many other aspects of the profit plan will be adversely affected. Therefore, there must be coordination between sales plans, production plans and inventory policies.

The production budget is an estimate of the quantity of goods to be manufactured during the budget period. In developing the production budget, the first step is to establish policies relative to inventory levels. In most businesses, inventory represents a highly relative investment and may have a significant impact on the major functions of the enterprise and its profit. The production budget and the inventory policies provide the basis for obtaining the coordination between sales plan, production plans and inventory policies. The objectives of inventory policies are a) to plan the optimal level of inventory investment and b) through control, to reasonably maintain the optimal levels. Inventory levels should be maintained between two extremes: an excessive level causing excessive carrying costs, risks, and investment, and an inadequate level to meet sales and production demands promptly. Therefore, one must be careful while considering inventory policies. There are three types of production policy related with inventory policy.

Stable Production Vs Unstable Inventory Policy: In this policy, fixed units are to be produced equally in every month or specified period; while the final or closing inventory of finished goods are to be unstable. Therefore, budgeted sales of that period are unequal.

Unstable Production Vs 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 numbers of units produced and budgeted sales are directly related.

Flexible in Both Production and Inventory Policy: In this policy production units and inventory level differ from time to time in the specified budget period.

2.29.2.4 Methods of Inventory Computation

There are different methods for computing inventory depending upon the given data. Some important methods are as follows:

A. Average Sales Method

Simple average method: Under this method stable inventory level will be maintained. This method can be used to compute inventory when total sales for budgeted period, total budgeted period and required stock of inventory of each period are given.

Simple average= total sales × n /N

Moving average method: This is the method which will be used by company having highly fluctuating sales due to competitions or seasonal demand or by company selling product with highly seasonal sales. When the historical data of sales plan are given, moving average method can be used to compute inventory level. Moving average method is based on uneven number of period.

B. Sales to Turnover Ratio

H.S.T.R method: This is the method, which can be used by company with highly seasonal sales and have the policy of fluctuating production and inventory level.

Inventory for the month= sales for the month×H.S.T.R (multiplier)

Turnover Times Method: Under this method inventory will be computed on the basis of turnover ratio or turnover time. It refers the relationship between sales and inventory. It is useful for stable inventory policy.

$$\text{Turnover time} = \frac{\text{Sales}}{\text{Average inventory}}$$

C. Proportional Sales Method

Under this method inventory is computed on the basis of sales ratio or on the basis of proportion to sales. Under this method, the inventory level will remain low, so for big company with highly seasonal sales or with large competitive market therefore will not be suitable to big companies. This method will be useful for the small company with limited but assured market or company dealing with basic commodities.

Inventory for the month = sales × ratio

2.29.2.5 Just - In – Time (JIT) Production

The just in time (JIT) approach to production planning is a recent trend in manufacturing. The main characteristics of JIT are as follows:

It is inefficient and costly to hold large inventories of safety stock for raw materials, subassemblies, or finished products. Therefore, these safety stocks should be minimized.

Setup times for production can be minimized through the use of robotics and process improvement studies. Therefore, frequent production setups may not be inefficient.

Very high quality of subassemblies and final products must be achieved in order to reduce the need for safety stocks.

In the light of these considerations, many companies have adopted an approach to manufacturing called just-in-time production. JIT is a production concept in which virtually nothing is purchased or manufactured until before it is needed. The concepts were originally made famous by Toyota and have resulted in huge cost savings for a variety of companies, such as Honeywell, Ingersoll Rand, and A.P. parts.

2.29.2.6 Simple Format of Production Budget

Budgeted sales	…………….
Add planned ending inventory	……………
Total required	…………….
Less beginning inventory of finished goods	…………….
Planned production for year	…………….

2.29.3 Purchase and Materials Budget

Once the production needs have been determined, the purchase and material budget is prepared. Material budget coordinates raw materials and parts required for production, inventory level of raw material and parts and raw materials and parts that must be purchased. Material budget ensure that the appropriate amounts of raw materials and components parts will be on hand at the time required. To plan for the costs of such materials and parts, the tactical plan should include 1) a detailed budget that specifies the quantity and cost of such materials and parts, and 2) a related budget of materials and parts purchases. Materials and purchase budget includes four sub budgets which are as follows:

2.29.3.1 Materials and parts budget: This budget includes only the budgeting of direct materials only. Parts are usually classified only as direct. Direct material is generally defined to include all materials and parts that are an integral part of the finished product and can be directly identified with the unit costs of the finished products. It helps to determine the quantities of raw materials and parts needed for production. The budgeted quantities of each raw materials and parts needed for each finished product is specified in the materials and parts budget by interim period (months and quarters) and by the responsibility centers. The basic inputs required to develop the direct materials and parts budget are 1) volume of output planned (from the production plan) and 2) standard usage rates by type of raw materials and part for each finished product.

Material budget = Production Budget × standard Usage Rate

2.29.3.2 Material and Parts Purchase Budget: Purchase manager is responsible for preparing detailed plan of purchase. The purchase budget specifies the quantities of each type of material and part to be purchased, the timing of those purchases and the estimated cost of material and part purchases. The purchase budget is directly concerned with the timing of actual receipt of materials and parts rather than with timing of purchase orders and usage. Material purchase budget is prepared with considering inventory policy of material and parts. While preparing purchase and material budget two basic timing factors should be taken into consideration, a) how much to purchase at a time and b) when to purchase.

Material Purchase = Material Usage + Closing Stock – Opening Stock

2.29.3.3 Materials and Parts Inventory Budget: As with the finished – goods inventory budget, with respect to sales and production, the materials and parts inventory budget provides a cushion between material and parts requirements and purchases. The timing of purchases will depend on inventory policies. The raw material and parts inventory policies are intended to minimize the sum of two classes of costs: the cost of carrying the inventory and the cost of not carrying enough. The primary consideration in setting inventory policies for materials and parts are: (Welsch, Gordon and Hilton; 2000:244)

Timing and quantity of manufacturing needs.

Economies in purchasing through quantity discounts.

Availability of materials and parts.

Lead time (order and delivery)

Perishability of materials and parts.

Storage facilities needed.

Capital requirements to finance inventory.

Costs of storage.

Expected changes in the cost of materials and parts.

Protection against shortages.

Risks involved in inventories.

Opportunity costs.

Closing Stock of Raw material= opening stock +purchase of raw material-material usage

2.29.3.4 The Cost of Material and Parts Budget: Cost of material and parts budget is planned cost of the materials and parts used in production process. The purchasing manager is responsible for estimating the unit cost of each raw material and part.

Material cost = material usage × material cost per unit

2.29.4 Direct Labor Budget

Planning and controlling direct labor refers the areas of personnel needs, recruitment, training, job description and evaluation, performance evaluation, performance measurement, union negotiations and wage and salary administration. Labor cost includes all expenditure for employees: top executives, middle management personnel, staff officers, supervisors, and skilled and unskilled employees. Labor generally is classified as direct or indirect. Direct labor costs are those cost that can be directly traced to specific production. The direct labor budget includes the planned direct labor requirements necessary to produce the types and quantities of outputs planned in the production budget. Once the production needs are known, the direct labor budget is prepared. The primary reasons for using a separate direct labor budget are to provide planning data about the amount of direct labor required, number of direct labor employees needed, labor cost of each product unit, and cash flow requirements. Another purpose of the direct labor budget is to establish a basis for control of direct labor. The direct labor budget is typically expressed in both direct labor hours and in amounts. The direct labor hours is computed b y the following methods: a) time and motion study, b) standard costing rates, c) research works, d) engineering studies, and e) direct estimation from executives

2.29.4.1 Advantages of the Direct Labor Budget

Effective planning of direct labor hours and costs has great advantages for a company. Following are the advantages of the direct labor budget: (Welsch, Gordon and Hilton; 2000:287)

The personnel function can be more efficiently performed because a basis is provided for effective planning, recruitment, training and use of personnel.

The finance function can be more effectively performed because labor is often one of the largest demands on cash during the year.

The budgeted cost of manufacturing each product (unit costs and total cost) is an important factor in several areas of decision making, such as pricing policy and union negotiations.

The control of direct labor costs is significantly enhanced.

2.29.4.2 Approaches Used in Developing Direct Labor Budget

For the annual profit plan, the direct labor budget is developed by responsibility centers, interim periods, and products. Following approaches is used to develop the direct labor budget: (Welsch, Gordon and Hilton; 2000:281)

Methods of wage payment

Type of production processes involved

Availability of standard labor times

Adequacy of the cost accounting records related to direct labor costs.

2.29.5 Overhead Budget

All the expenses that are related to the manufacturing, distribution and general administration are included in the overhead budget. Expense plays a crucial role in profit planning and control. Therefore expense planning is viewed as necessary to maintain reasonable expense levels to support the objectives and planned programs of the enterprise. Expense planning should not focus on decreasing expenses, but rather on better utilization of limited resources. There are two types of expenses as by responsibility controllable and non-controllable. Those expenses that are subject to the authority and responsibility of a specific manager are controllable expense. Those expenses that are not ordinarily controllable within the responsibility center, but rather at higher levels of management such as supervisory salaries are non-controllable expense. When expenses are viewed in relation to changes in output three distinct expense categories emerge;

1) Fixed expenses: Those expenses that is constant in total from month to month within relevant range of output and given set of conditions. They accrue with the passage of time, that is, they are time expenses. They are also called capacity costs. For example, salaries, property taxes, insurance, depreciation etc.

2) Variable expenses: Those expenses that change in total directly with changes in output or volume of work done. Variable expenses are activity based because they are incurred as a direct result of output, productive activity or work done. Variable expenses increase or decrease with change in output that is if output is doubled variable expense is doubled and if output is decreased then variable expense is decreased. For example, direct materials, direct labor etc.

3) Semi – variables expenses: Those variables that are neither fixed nor variable but are partly fixed and partly variable are semi – variable. As output changes, semi variable expenses change in the same direction but not in proportion to the change in output.

With respect to formal development of the tactical short-term profit plan, a separate overhead budget for each responsibility center is to be developed. These overhead budgets are 1) manufacturing or factory overhead budget, 2) selling and distribution overhead budget and 3) administrative overhead budget.

2.29.5.1 Manufacturing or Factory Overhead Budget

Manufacturing overhead is a part of all production cost. It includes all production cost other than direct materials and direct labor. It is not directly identifiable with specific products or jobs. Manufacturing overhead budget consists of indirect material, indirect labor and all other miscellaneous factory expenses; such as taxes, insurance, depreciation, supplies and repairs. Manufacturing overhead includes many dissimilar expenses therefore overhead costs are broken down by cost behavior for budgeting such as fixed, variable, and semi variable.

There are two distinct types of responsibility centers in manufacturing companies producing and service. Producing centers are those manufacturing departments that work directly on the products manufactured. Service departments do not work directly on the products but rather they furnish service to the producing departments and to other service departments such as maintenance and repair department, power department, purchase department, and time and motion study department etc.

2.29.5.2 Selling and Distribution Overhead Budget

A selling and distribution expense includes all costs related to selling, distribution and delivery of products to customers. The top marketing executive has the overall responsibility for developing the distribution and selling overhead budgets. While preparing the budget marketing executive should analyze the market situation, advertising policies, research programmes and fixed and variable elements. The two primary aspects of planning distribution expenses are as follows;

a) Planning and co-ordination
b) Control of distribution expenses.

2.29.5.3 Administrative Overhead Budget

Administrative overhead includes those expenses other than manufacturing and distribution. This includes the administrative expenses including the salaries of the managerial staff. They are incurred in the responsibility centers that provide supervision and service to all function of the enterprise rather than in the performance of any one function. Large portions of administrative expenses are fixed rather than variable. Therefore these expenses cannot be controlled. General administrative expenses are close to top management therefore the magnitude and effects of these expenses in profit should be overlooked strongly. The overall administrative budget includes several departmental budgets such as central administration, the controllers department, the treasurer’s department, the personnel department, and central staff. The administrative expense budget should be based on specific plans and programs. The historical record such, as past experience, management policy, and general economic condition is helpful in developing administrative expense budget.

2.29.6 Flexible Budget

The budget in which the costs are specified according to the nature such as fixed, variable and semi-variable is called flexible expense budget. This is a tool by which and overhead costs are controlled. Flexible budget is not based on only one level of activity instead it covers a range of activity within which the firm may operate. The flexible budget concept is complementary to the tactical profit plan. The flexible budget have two functions: 1) to provide expense plans for the tactical profit plan and 2) to provide expense plans adjusted to actual output. It is directly relate only to expense or costs. It is also called variable, dynamic, activity, and output-adjusted expense budget. The concept of flexible budget is that all expenses are incurred because of passage of time, output or productivity activity, or combination of time and output or activity.

2.29.6.1 Features of Flexible Budget

Expenses or costs must be identified into fixed and variable expense or costs.

Expenses must be related to output or productive activity.

Output or productive activity must be reliably measurable.

Flexible budget formulas for each expense must be for a specified time period and for a specified relevant range of output or productive activity.

For planning and controlling purpose, flexible budget formula must be developed for each expense in each responsibility center. (Welsch, Hilton and Gordon; 2000: 343)

2.29.6.2 Flexible Budget Format

There are three types of format for preparing flexible budget. They are:

1. Table Format: This format is used for introduction purpose to express flexible budget for different level of activity or output within the relevant range. It does not indicate the fixed and variable cost rate. Large company which has special manpower to prepare budget and where the cost structure is complicated uses this method.

2) Formula Format: This format provides a formula for each expense account in each responsibility center. The formula gives the fixed amount and the variable rate. This method is based upon average so; this method is useful for small business or department where the precision on computation is vital.

Formula format: $Y= a + bx$

3) Graphic Format: This format is useful when step or non-linear expenses are not to be used on a straight-line relationship. The budget amounts can be directly read from the graph in this format.

2.29.6.3 Uses of Flexible Budget

Flexible budget can be applied in all the functions in a company – manufacturing, selling, and administrative- but they are more frequently used in the responsibility center of manufacturing function. (Welsch, Hilton and Gordon; 370:2000)

1. To facilitate preparation of the expense budgets for the responsibility centers for inclusion in the tactical profit plan.
2. To provide expense goals for the managers of responsibility centers during the period covered by profit plan.
3. To provide budget expense amounts adjusted to actual activity for comparison purposes in the monthly performance reports

2.29.7 Capital Expenditures Budget

A capital budgeting decision may be defined as the firm's decision to invest its current funds most efficiently in long term assets in anticipation of an expected flow of benefits over a series of years. (Pandey; 1992:343)

A capital budgeting is the marketing of long-term planning decisions for investment and their financial budgeting then consists in planning the deployment of available capital for the purpose of maximizing the long-term profitability of the firm. (Horngren; 452)

A capital expenditure is the use of funds to obtain operational assets that will help earn future revenues or reduce costs. Capital expenditures include such fixed assets as property, plant, equipment, major renovations, and patents. Therefore capital expenditure budget is the process of planning and controlling of the long–term and short-term expenditure for expansion, replacement, and contraction of fixed assets. Capital expenditures are investments, as they require commitments of resources today to receive higher economic benefits in the future. Cash outflow and cash inflows are the major elements of capital budgeting. The capital budgeting is essential for planning and controlling purpose. Top executive and departmental managers are responsible for capital budgeting decision. The importance of capital budgeting is a) to avoid idle operating capacity, b) to avoid excess capacity, c) to avoid investment in capacity that will earn less than an adequate return on the investment, and d) to evaluate alternative capital expenditure.

2.29.7.1 Methods of Measuring the Economic Value of Capital Expenditure

While measuring the economic value of capital expenditure there are two most widely used methods: 1) Discounted cash flow methods (DCF) and 2) Shortcut and Simple Methods.

2.29.7.1.1 Discounted cash flow methods: The time value of money is considered in this method. It takes the time value of money into account with using discounting rate. The following discounted methods are used in capital expenditure decision.

2.29.7.1.1.1 Net Present Value (NPV): In this method, the discounting rate is used to discount the cash flow. The present value of cash inflow is determined and then initial cash outflow is deducted from the discounted cash flow to compute the net present value.

$$NPV = TPV - Investment$$

Where, NPV = Net present value

TPV = Total Present Value

2.29.7.1.1.2 Internal Rate of Return: Internal rate of return is an important method of calculating capital expenditure decision. Internal rate of return is that cost of capital, which is applied to assess a series of future cash inflows that origins the sum of their present values to the same level as the original investment. Or the discount rate that makes net present value equal to zero is called Internal Rate of Return. IRR is also called yield rate or marginal efficiency.

$$IRR = LR + \frac{PV \text{ at } LR - I\ X}{PVLR - PVHR} * (HR - LR)$$

Where, IRR = Internal Rate of Return

LR = Lower Rate

HR = Higher Rate

I = Investment

2.29.7.1.2 Simple Method or Traditional Method

This method does not consider the time value of money. There are two major methods of simple method to determine the capital expenditure.

2.29.7.1.2.1 Payback Period Method: Payback period method is the simplest and frequently used method for evaluating capital expenditure. Payback period is the minimum time required to recover the initial cash outlay from the annual cash inflows. The payback period is computed by the initial cash outflows by the annual return. Payback period is computed in two situations.

In case of even earning; $PBP = \frac{I}{Ec}$

Where, PBP = Payback Period

I = Investment

Ec = economic cash flow or annual cash inflow (CFAT)

In case of uneven earning,

$$PBP = N + \frac{I - \text{Cumulative Ec at N}}{\text{Ec of (N+1) year}}$$

Where, N = Minimum No. of year when cumulative Ec is very near to investment.

I = Investment

2.29.7.1.2.2 Average Rate of Return Method

Average rate or return is also known as Accounting rate of return (ARR) on investment. ARR on investment is the percentage of annual net return before depreciation and after taxes to the initial investment. It is simple to compute and based only on cash flow but it ignores the time value of money.

$$\text{Average Rate of Return} = \frac{\text{Average Earning After Tax}}{\text{Average Investment}} \times 100$$

Where, $\text{Average Earning} = \frac{\text{Total Income}}{\text{No. of Years}}$

If ARR is greater than minimum rate of return then the project is accepted on the other hand if ARR is less than the minimum rate of return then the project is rejected.

2.29.8 The Cash Budget

The cash budget is a plan of future cash receipt and payment. It is an integral part of cash planning. One of the major responsibilities of management is to plan, control and safeguard of the resources. Two kinds of resources flow through many businesses– cash and non-cash assets. The cash budget focuses on cash resources that are cash inflows and cash outflows. Cash budget helps in effective planning and controlling of cash flows. It helps in assessing cash needs and using excess cash. A cash budget includes two parts: (1) the planned cash receipts (inflows) and (2) the planned cash disbursement (outflows). Planning cash inflows and outflows gives the planned beginning and ending cash position for the budget period. A cash plan or budget is prepared from the previously prepared budgets such as sales budget, purchases budget, material budget, overhead budgets and other functional budgets. Company treasurers are responsible for the preparation of cash budget. A cash budget is prepared on three different time horizons – long term, short term, and immediate term. A cash budget helps management in: 1) determining the future cash needs of the firm, 2) planning for financing of those needs, and 3) exercising control over cash and liquidity of the firm.

2.29.8.1 Purposes of Cash Budget

The primary purposes of the cash budget are as follows: (Welsch, Gordon and Hilton; 2000:434)

To give the probable cash position at the end of each period as a result of planned operations.

To identify cash excesses or shortages by time periods.

To establish the need for financing and or the availability of idle cash for investment.

To coordinate cash with, total working capital, sales revenue, expenses, investments and liabilities.

To establish a sound basis for continuous monitoring of the cash position.

2.29.8.2 Approaches Used to Develop a Cash Budget

Two primary approaches are used to develop the cash budget- cash receipts and disbursement approach and financial accounting approach.

2.29.8.2.1 Cash Receipt and Disbursement Approach: This method is also called cash account or direct method. It is simple to develop. This method is based on detailed analysis of the increase or decrease in the budgeted cash account that would reflect all cash inflows and outflows from such budgets as sales, expense, and capital expenditures. It is used for short-term cash planning as a part of the annual profit plan. In this method the cash receipts from various sources and the cash payments to various agencies are estimated. In the opening balance of cash estimated cash receipts are added and from the total, the total of estimated cash payments is deducted to find out the closing balance.

2.29.8.2.2 Financial Accounting Approach

This method is also called as indirect income statement approach. It is used more often for long-term cash planning. This approach requires less detail and fits the approaches commonly used in long range planning. Basically, this method develops cash flows starting with net income. The net income is converted from the accrual basis to cash basis.

2.30 Planning and Control of Non Manufacturing Organization

A non-manufacturing organization or a merchandising business purchases goods and resell them in essentially in the same form rather than converting raw materials into finished product. A non-manufacturing enterprise purchases and sells a number of dissimilar products that vary in major ways, such as usage, size, weight, price, style, and service required. Because of the diversity in characteristics of items sold, planning focuses more on Rupees than on units. A non-manufacturing enterprise would not develop budget covering production, raw materials purchase, direct labor, or manufacturing overhead. Non-manufacturing enterprise focus on the merchandise budget.

2.30.1 Merchandise Budget

Merchandise budget is prepared in non-manufacturing companies. It includes planning of sales, reduction, markdown, employee discounts, stock shortage, purchase and gross margins. It is the first sales plan in merchandising company. Two approaches are used to plan sales in non-manufacturing company.

1. Unit price Approach: According to this approach, the units to be sold and the unit sales price for each product are planned. This method is practical when the number of product lines is small and the selling price is relatively high.

2. Sales-dollar Approach: This approach plans sales in dollars only for each department. This approach is used when the number of product lines is large and the selling prices across product lines vary significantly.

2.30.2 Planning Inventory and Purchasing

Planning Inventory: An important feature of planning inventory levels and purchase in non-manufacturing companies is that plans are developed in terms of retail prices. Then the retail price is converted to purchase cost. That is since the sales are planned at retail prices, the beginning of month (BOM) stock levels are also planned in retail. The BOM inventory for one month is the ending of month inventory (EOM) for the preceding month thus, planning focuses on sales and the BOM stock level of each month. The following formula is used to determine the stock levels.

Planned BOM stock at retail = Stock to sales ratio X planned sales

Planned EOM stock at retail = BOM stock of the next month

Where, Stock to sales Ratio = $\frac{\text{Average Stock (at retail)}}{\text{Net Sales}}$

Planning Purchases: The following formula is usually applied to compute the planned purchases at retail value:

Planned purchases = Planned net sales + Planned reductions + Planned EOM stock+ Planned BOM stock.

2.30.3 Open-to-Buy Planning

Open-to-Buy is a term generally used in non-manufacturing enterprises to refer to that amount that a buyer can spend for goods during a specified time period.

Table: 3

Format for Open to Buy Planning

S.N	Particulars	Amount	Amount
A	Stock Requirements		
	1.EOM Inventory		xxxxx
	2.Planned Sales for the Month	xxxx	
	Less: Actual sales to date	xxxx	xxxxx
	(Y) Planned sales for remaining period		xxxxx
	3.Planned Reductions	xxxx	
	Less: Actual Reductions to date	xxxx	
	(Z) Planned reduction for remaining period		xxxxx
A.A	Total Stock Needed (Y+Z)		xxxxx

B	Stock Available 1.BOM Stock 2.Merchandise received to date Total stock available Less: Actual sales to date Actual reductions to date	 xxxx xxxx xxxx xxxx	 xxxxx xxxxx
	Total Add: Merchandise ordered for month		xxxxx xxxxx
B.B	Total Stock Available		xxxxx
C.	Open-to-Buy at Retail (A.A – B.B)		xxxxx
D.	Open-to-Buy at Cost = Open-to-Buy at retail X (1- Mark up rate)		 xxxxx

2.30.4 Other Budgets in Non-manufacturing Enterprise

Others budget such as expense budget, cash budget, capital budget etc. in non-manufacturing situations present the same problem as encountered in a manufacturing situation.

2.31 Completion of Profit Plan

The development of an annual profit plan ends with the planned income statement, the planned balance sheet, and the planned statement of cash flows. These three statements summarize and integrate the detailed plans developed by management for the planning period and report the primary impacts of the detailed plans on the financial characteristics of the company. Budget director has the responsibility in the completion of profit plan. The planned income statement is concerned with determining the total income of the planned period. It is prepared under accrual basis rather than the cash basis. Similarly the planned balance sheet is concerned with forecasting total assets and properties and capital and liabilities of the company.

2.32 Performance Reports

Performance reporting is an important part of a comprehensive profit planning and control system. The performance report of a comprehensive PPC program significantly influences the extent to which the organization's planned goals and objectives are attained. Performance reports are usually prepared on a monthly basis and follow a standardized format from period to period. Such reports are designed to facilitate internal control by the management.

Performance report compares actual goals and budget plans. The measurement of actual performance relative to planned targets is just as applicable to non-manufacturing companies as it is to manufacturing companies.

2.32.1 Features of Performance Report

The important features of performance report are as follows :(Welsch, Hilton and Gordon; 2000: 544-545)

Tailored to the organizational structure and locus of controllability (that is by responsibility centers)

Designed to implement the management-by-exception principle.

Repetitive and related to short time periods.

Adapted to the requirements of the primary users.

Simple, understand and reports only essential information.

Accurate, and designed to pinpoint significant distinctions.

Prepared and presented promptly.

Constructive in tone.

2.33 Analysis of Budget Variance

The difference between planned goals and actual results is called variance. The variances may be favorable or unfavorable. The variance is favorable when the actual result is greater than the budgeted. Similarly the variance is unfavorable when the actual result is less than the budgeted. Variance analysis is an important tool that can increase the usefulness of periodic performance reports. Rather than taking action only on the basis of a difference between actual and planned costs or sales variance analysis enables management to decompose such difference into smaller sub variances which helps management to better understand the causes of variances from planned performance and take corrective action through management by exception.

2.34 Review of the Earlier Studies

There has been a lot of research work in the past on PE's of Nepal and the application of PPC in both manufacturing and non-manufacturing companies. These past studies have helped this study to be more effective and logistic in its sense. To solve the task presented in this study several concepts and theories of these past thesis have been taken. Many researchers have shown interest in doing research in PPC and have carried numerous research and field observations to illuminate pertinent issues. Very few researchers have carried research in PPC of NFC. Whatever the research in the areas of profit planning and control made are also not in depth and in detail. Very few dissertations have been submitted in the topics of profit planning and control of NFC. Some of the researcher's findings and suggestions of the previous studies are reviewed here.

1. Dorna Bahadur Sen (2001)

Mr. Sen had submitted his thesis titled "Profit Planning of Non-manufacturing enterprise in Nepal: A Case Study of Nepal Food Corporation". The study was mainly concerned with the finding of degree of application of profit planning system in NFC to increase its profitability by increasing its effectiveness.

The main objectives of his research work were:

a) Comparative study of sales trend.

b) Comparative study of purchase trend.

c) Analytical studies of inventory policy.

d) To examine the cost structure.

His research covered the time period of nine years from the FY 2049 to FY 2057. For data gathering process, secondary sources were used.

Major Findings:

1. The planning section that makes the plan is confusing and creates conflict between profit and goals. NFC profit planning is adversely affected.
2. NFC has no any objectives to create and maintain an optimum enterprise environment that maximize the interest and motivate all employees.
3. There is no well-developed system of performance evaluation for employee. No fair system of reward and punishment to employee on the basis of their work performance.
4. So far NFC has not achieved its specific goals that were targeted.
5. NFC is not capable enough to formulate and implement its profit plans.
6. Corporation has established a planning department but there is no concern authority to decide and create various plans.
7. Most of the PE's in Nepal has not been able to generate work efficiency and financial capacities are still dependable on government protection.

Recommendations offered:

1. NFC must formulate clear-cut goals objectives policies, long-term plans, and strategic programs etc. while preparing sales and purchase budgets the concern authorities should be flexible.
2. Corporation should come up with the program of reward and punishment for the workers who are dedicated and for the non-dedicated one.
3. The concept of PPC should be well informed to every level of management.
4. Planning department should be provided with adequate authority in decision-making and in implementing various plans.
5. A separate costing system should be developed.
6. The corporation should be away from nepotism and favoritism and should also be away from government pressure while selecting the staff.
7. The administrative expenses should be checked time to time to avoid unnecessary expenditure.

2. Mr. Damodar Adhikari (2004)

Mr. Adhikari had submitted thesis titled, “Profit planning in manufacturing enterprise: A case study of DDC”. The specific objectives of his study are;

1. To analyze, the functional budgets on sales and production sector of the DDC.
2. To analyze, various accounting ratios, measure the profitability and efficiency of the DDC.
3. To analyze the budget target and its achievement.

Major Findings

1. Production and sales of DDC is increasing annually although the growing rate is fluctuated.
2. DDC has no proper practice in segregating into fixed and variable.
3. Most of the budgeted figures are higher than actual figures.
4. DDC has prepared direct labor budget only based on technical and administration. It has not prepared according to time and rate.
5. Capacity utilization is very high but the productivity ratio is low.
6. CVP analysis shows that DDC is operating below BEP sales.
7. Timely accounting and auditing works are not maintained.

Recommendations offered:

1. DDC should clearly define its broad objectives.

2. Entrepreneurship should be developed within the enterprise and it should be operated on commercial basis.

3. Political justification, government intervention and unnecessary formalities should be eliminated.

4. A systematic approach should be made towards comprehensive profit planning.

5. Collection and processing cost are very high, so it should control according to profit plans.

6. DDC must segregate its variable cost and fixed cost.

7. The management or the planning committee of DDC must analyze relevant internal and external variables and their possible impact in future production and sales in profit planning.

3. Binaya Dhungana (2005)

Mr. Dhungana has submitted the thesis on the topic "Projected Financial Statements of Nepal Food Corporation". The researcher has primarily focused on the assets, liabilities, sales, expenses, cash flow of the preceding year followed by the policies and practices adopted by the management of NFC with a view to provide workable suggestion which may be helpful for the projections.

The specific objectives of the study were:

1. To determine the total number of units of products or services NFC realistically expects to sell for the year in each sales depot at the expected prices in the basic market orientation: local, national, regional, or export.

2. To calculate and identify all the components of costs of sales that incur under both the low and high sales projections.

3. To estimates future funding requirements for the organization.

4. To prepare projected financial statements.

5. To examine break-even point.

Major Findings:

1. NFC is not preparing projected financial statements at all. It only prepares annual budget for the one financial year before the start of the concerned financial year.

2. NFC does not analyze its financial statement by calculating its different ratios, which is very important for planning and controlling business operating.

3. NFC is not calculating the BEP at which the organization gets no profit no loss status.

4. Debtors' collection period of NFC is very high. The reason behind the poor collection period is due to non-recovery of old due balances to be recovered from the government and government undertakings.

5. The corporation has no in depth analysis of the strength, weakness and threats.

6. A high proportion of dept in the capital structure has been observed in NFC would lead to inflexibility in the operations of the firm because the creditors may exercise pressure and interfere in the management.

7. From the last many years, the owner has not got any return on investment due to poor financial condition. In this context, it seems that the corporation has not realized the responsibility towards the government investments.

Recommendations offered:

1. NFC should predict the sales volume systematically and purchase the raw material for the concerned financial year.

2. The volume of sales should be increased and the proportion of current assets should be maintained on the basis of sales volume.

3. The corporation needs to operate in a proper way so that it can have lesser operating and non-operating expenses. If we look at operating expense approx. 50% of the expenses have been incurred only for staff salary and facilities.

4. To overcome the problem of continuous replacing of short-term loan, long-term loan facility should be utilized. Besides, the interest rate of long-term loan is expected to be less costly than short-term loan.

5. Poor management, ad-hoc pricing policy, absence of performance auditing, traditional accounting method, overstaffing, poor personnel management, non-transparent purchasing system, costly distribution, are the main responsible factor of piled up inventory and low turnover. These needs to be investigated and scrutinized with immediate effect and corrective action should be taken.

6. The company should periodically assess its performance through analysis and internal auditing in different functional areas like personal, finance, marketing etc. In financial area, the corporation should accept ratio analysis; funds flow analysis, trend analysis and other relevant mathematical models for evaluating its financial performance and diagnose the financial strength and weaknesses on time in order to correct the loopholes.

4. Pujan Wagle (2006)

Miss. Wagle has presented her thesis on the topic "Profit Planning and Control Implications in Nepalese Public Enterprises: A case study of Profit Planning and Control in NFC". He has tried to understand the practical aspects of the industry and to highlight the current practice of PPC in Nepalese Public Enterprises.

Major Findings:

1. The overall economic conditions of Public enterprises are very poor. NFC is financially very weak and its financial condition is becoming more and more unmanageable.
2. NFC's objectives are often not clear-cut and result oriented. NFC doesn't fix the target for specific goal for the budget period. For example growth, objective, capacity utilization is not targeted to achieve some specific goals.
3. Management has not been made fully responsible for achieving predetermined objectives.
4. Lack of planning, management, poor distribution, and storage and lack of efficient response have always contributed to food shortages.
5. NFC doesn't have any long range and medium range forecasts. Forecasting mechanisms are of past experiences and personnel judgment of the managers.
6. Regular financial appraisal is absent. No financial efficiency indicator has been identified.
7. There are not any effective programs to increase the productivity of manpower. Lack of employee's motivation, performance evaluation, incentives and training and career development etc becomes the major causes for lower profitability of NFC and lower productivity of the employees.
8. The corporation has not proper inventory management practice. Lack of inventory policy shows the inventory level has been fluctuating over the period of time.

Recommendations offered:

1. National policy, concept and vision of the government should be clear in its objective and functional area.
2. To improve the profit pattern NFC should develop profit plan formulation and proper implementation of it.
3. NFC should prepare flexible budget in different level and cost volume profit analysis should be developed for managerial decision-making.

4. Transportation cost comprises much expense. NFC unidirectional flow control, supply from nearest surplus areas and procurement in hill areas will save the significant amount of transportation cost.

5. NFC must maintain the cash flow statement due to which position of cash in NFC will be clear. There is a little expectation of profit if there is a clear cash structure of NFC. Therefore, the cash flow statement of NFC must not be neglected.

6. There is a need to improve the management of inventory and receivables and reduction of cost of transportation and handling and purchases of food grains.

7. It is suggested for the substantial reduction of cost from improved cash management, tightening upon expenditure budget, better control of transport and staff rationalization.

8. Nepal Food Corporation needs to explore business opportunities and develop it as a self-sustainable public enterprise.

5. Mr. Umesh Raj Paudel (2007)

Mr. Paudel has submitted the thesis entitled “Profit Planning and Control of Government Corporations, A Case Study of Salt Trading Corporation Limited”. Mr. Paudel has concerned his study to examine the practice of PPC in the government corporations. He has focused his study to analyze the sales and purchase budget of Salt Trading Corporations Limited.

Major Findings

1. The overall financial condition of STC is satisfactory.
2. The planning process of STC is little bit ambitious because the actual achievement is lower than that of targeted figure.
3. STC has practiced only short term planning rather than long term planning.
4. Promotional expenses and programs in STC are very low for a trading organization dealing in diversified products.
5. Minimum expenditure is made in advertisement. In fact, most people don’t know that STC deals in product other than salt.

Recommendations offered:

1. STC should develop realistic strategic plan as well as tactical plan regarding sales, purchase and expenses.
2. Long term objectives of the STC should be clearly formulated so as to make clear distinction between profit motive and social motive.

3. STC needs to explore business opportunities and develop it as a self-sustainable public enterprise.
4. STC should focus on promotion and advertisement to enter into commercial trading of various products.
5. To improve the profit pattern STC should develop profit plan formulation and make proper implementation of it.

6. Mr. Lekhnath Dahal (2008)

Mr. Dahal has submitted the thesis entitled, "Comprehensive budgeting and its impact on profitability of Public enterprise: A case study of Gorkhapatra Sansthan". He has focused his study to examine the current practice and effectiveness of profit planning in Gorkhapatra Sansthan and to analyze various functional budgets of Gorkhapatra Sansthan.

Major Findings

1. GC did not have systematic comprehensive profit planning. The budgeting system is not based on scientific and realistic approach.
2. Sales and production forecast are unrealistic.
3. There is under utilization of available capacity in GC.
4. There is no systematic way of segregating cost into fixed and variable.
5. Overhead costs were not systematically classified.
6. GC liquidity and profitability ratios were not satisfactory.
7. GC was suffering from loss in FY 2059/060, 060/061, 061/062.

Recommendations offered:

1. GC should consider its pricing policy. The cost of production should be considered while pricing of the publication. It should attempt to control the production cost.
2. The unproductive expenses should be reduced by the management and administrative staffs of GC.
3. GC should prepare the sales budget on the realistic ground.
4. GC should prepare periodic performance reports about the activities of corporation.
5. GC should consider break even analysis while preparing sales plan.
6. All personnel should be made to participate in decision making and planning process.
7. GC needs to classify the costs in scientific manners.

B. Research Gap

There was very few research studies made in the field of business and service sector. Those that were made were also not done in depth. Those research studies lack the performance analysis of the company. They dealt with either single accounting tool such as CVP analysis or they were limited in the projections of sales and production. This research study dealt with the Profit Planning and Control of a NFC as a whole and tried to find out the drawbacks of the corporation. The previous studies lacked about the budget variance, which was focused in the study.

CHAPTER- THREE
RESEARCH METHODOLOGY

The main objective of this research is to understand the practical aspects of the enterprise and to highlight the applications and current practice of Profit Planning and its effectiveness in realizing profit in Nepal Food Corporation. Moreover the objective of the study is to analyze, examine, and interpret the budgeting techniques with the help of various financial statements, accounting analysis, statistical tools and non-financial subject matters. The major aspects of research methodologies adopted in course of this study were as follows:

3.1. Research Design

Research design provides the overall framework or plan for the collection and analysis of data during the research study. It is the plan, structure, and strategy of investigation conceived so as to obtain answers to research questions. This study is an examination and evaluation of budgeting procedure in the process of profit plan of NFC. This study is closely related with the various functional budget and other accounting statements that the company has adopted. An intensive analysis of historical and descriptive research design was used in this study to analyze the performance of past five years from the FY 2057\2058 to FY 2062\063. The research possesses both quantitative as well as qualitative aspects.

3.2 Sources of Data

The source of data comprises both primary and secondary but the major source is secondary. The source of data is the office of NFC. The secondary data was taken mainly from the annual reports, balance sheets, profit & loss accounts, cost sheets, auditors' reports of NFC and other published and unpublished data. The help of weekly magazines, daily newspapers and business journals were also taken.

3.3 Population and Sample

Since the study is wholly focused on the single company entitled NFC therefore, the company as a whole is a population and sample.

3.4 Period Covered

The study analyzed only for five fiscal years period. The period for conducting research starts from the FY2058/059 to the FY 2062/063.

3.5 Data Collection and Analysis

Secondary data were collected from office records, annual reports, balance sheet, profit & loss account and unpublished thesis related with this matter. The primary data were collected from the concerned authority by discussion, opinions and information provided by them.

The analysis of data were done by using different accounting, financial and statistical tools. The statistical tools used are mean, co-relation, and regression. Similarly different ratio analysis, variance analysis etc. were used as financial tools. As for the accounting tools different functional budgets were taken.

3.6 Research Variables

The research variables of the study were related with the accounting statement of NFC. Sales, production, purchase, inventories, expenses, labor, profit and loss were some of the important research variables that affect the research study.

CHAPTER- FOUR

PRESENTATION AND ANALYSIS OF DATA

Profit Planning and Control is the tool that helps a firm to achieve its objectives. It helps in effective planning of a firm. To make profit, effective planning and control of cost is necessary. PPC deals with all these aspects. NFC is a single organization that works for the benefit of poor people even at loss since the time of establishment.

NFC prepares only the short – range profit plan. Tables and diagrams were used to make the result more simple, clear and effective.

To make the data presentation more simple and effective this chapter was divided into three portions:

a) **Budget Analysis:** In this portion the various functional budgets that NFC prepares were presented and analyzed with the help of various statistical tools.
b) **Financial condition of NFC:** In this portion the financial condition of NFC was tried to find out with the help of financial tools.
c) **Variance Analysis:** In this portion variances between actual and planned budget goals were compared.

4.1 Budget Analysis

4.1.1 Sales Budget

The sales plan is a necessary portion of PPC. This is the first step of budgeting process. All the organization prepares sales plan as a primary source to provide the necessary information for developing other elements of a comprehensive profit plan, to reduce uncertainty about the future revenue, and to facilitate management's control on sales activities.

NFC an organization involved in the distribution of food grains in the country has no strategic sales plan. It makes only tactical (short term) sales plan. NFC has a policy of selling various types of food grains. The food grains include Rice, Wheat, Pulses, Maize, Paddy, Mustard, and it also sells goats.

NFC considers the following sales related activities in preparing sales budget:

First of all, NFC fixed quotas for each district at the central level to prevent food crisis in the food deficit areas. Then they fix the selling price of the food grains that is lower than that of the market price. The food grains are then transported to the needed place and are stored in the NFC godowns. For transportation government provides grant for transportation of food grains to remote places. NFC uses its own trucks as well as public transport for the transportation. Lastly, the food products are distributed to the needy people through the sales depots of NFC that are located in different districts of the country. For promotional campaign NFC doesn't use any type of promotional campaign for marketing its product. But general announcement about the selling of basic food grains at the reasonable price at the time of Dashain is made through different media.

NFC prepares sales budget of total food grains and non food grains as a whole. NFC has a practice of preparing short-range sales budget for every coming fiscal year. Basically NFC sales mostly comprise of rice. NFC sells more than 15 different types of rice of superior grade to lower grade. Besides rice, the next item that NFC regularly sales and prepares sales budget is of goats. Other food grains are not sold regularly. Here only sales budget of rice and goats are considered

4.1.1.1 Sales Budget of Rice

The table shows the total actual and budgeted sales of rice in amounts from the fiscal year 2059/060 to year 2063/64. In this sales data, sales of other food grain other than rice and non-food grains item are excluded. The detailed actual and budgeted sales are shown in **Appendix-1 & 2**.

Table 4
Total actual and budgeted sales of rice

(in Rs.)

Fiscal year	Budgeted Sales Amount (Rs.)	Actual Sales Amount (Rs.)	Achievements %
2059/060	40,12,67,000	35,83,76,029	89.31%
2060/061	42,03,50,000	30,69,18,464	73.01%
2061/062	44,50,91,000	32,00,30,872	71.90%
2062/063	68,87,41,000	47,91,18,493	69.56%
2063/064	52,65,50,000	60,60,30,213	115.09%

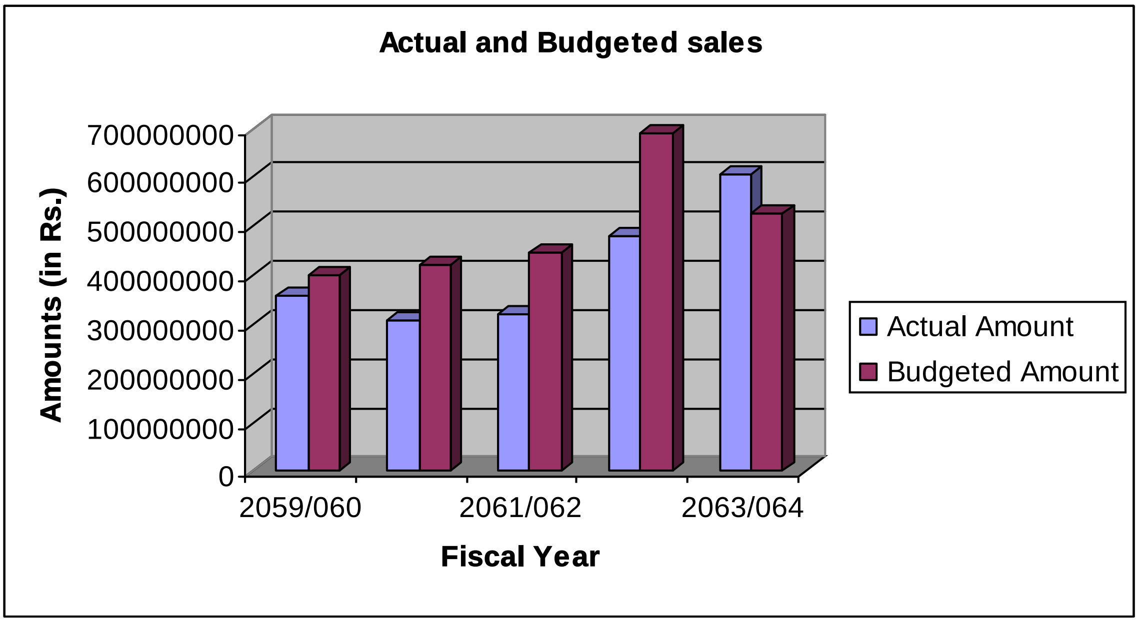
Source: NFC (appendix 1 & 2)

The above table shows the budgeted and actual sales of rice in amounts from the fiscal year 2059/060 to 2063/064. The nature of budgeted and actual sales of rice is fluctuating. This shows the actual sales achievement was not consistent with the budgeted sales. However the budgeted and actual sales in amount were in increasing trend. In the fiscal year 2062/063 the actual sales was far less than the budgeted sales compared with other years which shows the poor sales planning in that fiscal year. As a whole the budgeted sales exceeded the actual sales except in the fiscal year 2063/064 where the actual sales exceeded the budgeted sales. The overall figure shows relatively good and optimistic situation for NFC. This figure has kept a place to be optimistic for NFC in coming days.

The above table is described from the following graph to have a clear idea,

Graph 1

Target and Actual Sales Trend



The above graph represents the target and actual sales achievement figure of rice for the five years. The graph clearly shows that the target and actual sales in the fiscal year 2059/060 was nearly equal while there was a great variation in the FY 2063/064. And it also shows that the actual sale has exceeded the budgeted sales in 2063/064.

Calculation of mean and deviations

The following table shows mean, standard deviation, co-efficient of variation and correlation co-efficient to analyze the relationship between the actual sales with the budgeted sales. The summarized results of the statistical tools are presented below. The detailed calculation is in **Appendix 3.**

Table 5

Calculation of Different Statistical Tools

	Budgeted sales (X)	Actual sales (Y)
Mean (X, Y)	49,63,99,800	41,40,94,814
Standard deviation (σ)	10,52,33,631.9	10,41,42,749.5
Co-efficient of variation(C.V)	21.20%	25.15%
Correlation co-efficient (r)	0.6674	
Probable error of correlation (P.E. (r)	0.1672	

The above table shows that the budgeted sales deviated from the actual sales figure. There is no consistent between the actual and budgeted sales. From the above table it is also noticed that the co-efficient of variation of actual sales is slightly larger than the budgeted sales. That means the budgeted sale was less variable or uniformly distributed than the actual sale which was more variable or less uniformly distributed. This signifies the poor planning of NFC.

To analyze the degree of relationship between the budgeted and actual sales, Karl Pearson's Correlation of Co-efficient statistical tool was used. It is the most widely used statistical tool for calculating the correlation co-efficient between the two variables X and Y. It is generally denoted by 'r'. The above table shows that the Correlation co-efficient (r) between budgeted sales and actual sales is 0.6674. To calculate 'r', budgeted sale was assumed to be independent variable denoted by X and actual sale was assumed to be dependent variable denoted by Y. The value of 'r' which is 0.6674 signifies that there is positive correlation between the budgeted and actual sales and there is moderate degree of correlation between the budgeted and actual sales.

The probable error P.E(r) of Correlation Coefficient is an old measure to ascertain the reliability of the value of Karl Pearson coefficient of correlation. It is used to test whether the calculated value of sample correlation coefficient is significant or not.

- If r < 6* P.E (r), the value of r is not significant,
- If r > 6*P.E (r), the value of r is significant

In the above table the value of 'r' is 0.6674 which is lower than 6 X P.E (r) {6 X 0.1672=1.003}. It means the value of r is not significant. The actual sales will not go in the same direction as budgeted sales. There will be fluctuation in the actual sales.

Estimation of Actual Sales of 2064/065

The regression line is a useful statistical tool; it not only finds out the degree of relationship between the budgeted and actual sales but also establishes the nature of relationship between the two or more variables. It helps to forecast the possible actual sales (dependent variable 'Y') with the help of budgeted sales (independent variable 'X'). Statistical tool called regression analysis of least square method can be used to analyze the trend of actual sales and to estimate the future possible sales for a given time. Time is and important factor which determines the future sales. This time series relationship can be expressed in terms of straight line trend by least square method. A line fitted by the method of least squares is the line of best fit.

Table 6

Calculation of least square trend

FY	Actual Sales (Y) in	X (base year	X^2	XY

	Amounts	2061/062)		
2059/060	35,83,76,029	-2	4	-71,67,52,058
2060/061	30,69,18,464	-1	1	-30,69,18,464
2061/062	32,00,30,872	0	0	0
2062/063	47,91,18,493	1	1	47,91,18,493
2063/064	60,60,30,213	2	4	1,21,20,60,426
	∑Y=2,07,04,74,071	∑X=0	$\sum X^2$=10	∑XY=6,67,50,83,97

The following formula has been used to determine the regression equation. The straight line trend equation is given by,

Y= a + b X

Where, b = slope of the regression line which measures the change in Y per unit change in X. Two normal equations are solved to get the value of constants 'a' and 'b' according to least squares method.

$\sum Y = na + b\sum X$ ……….. i

$\sum XY = a\sum X + b\sum X^2$ ………. ii

By solving these two equations (i &ii) the value of a and b is determined and found to be,

$$a = \frac{\sum Y}{N} = \frac{2070474071}{5} = 414094814$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{667508397}{10} = 66750840$$

Substituting the value of 'a' and 'b' in the equation Y= a+b X, the trend line equation is,

Y = 414094814 + 66750840 X

The trend line of NFC is Rs. 414094814 + 66750840X. That means the sales will increase by Rs 66750840 every year if the sales of past trend continuous in the future. By using this trend equation it can be estimated that the sales of the fiscal year 2064/065. The value of 'X' will be 3 (base year being 2061/062=0).

Actual Sales of 2064/065 = 414094814 + 66750840 * 3

= Rs. 61,43,47,334

It shows that the sales of rice in FY 2064/065 of NFC will be of Rs 61,43,47,334. Likewise the sales of other coming fiscal years can also be calculated.

4.1.1.2 Sales budget of Goats

Another item that NFC makes regularly sales is goat. The following table shows the sales of goats.

Table 7

Actual and budgeted sales of goats

(in Rs.)

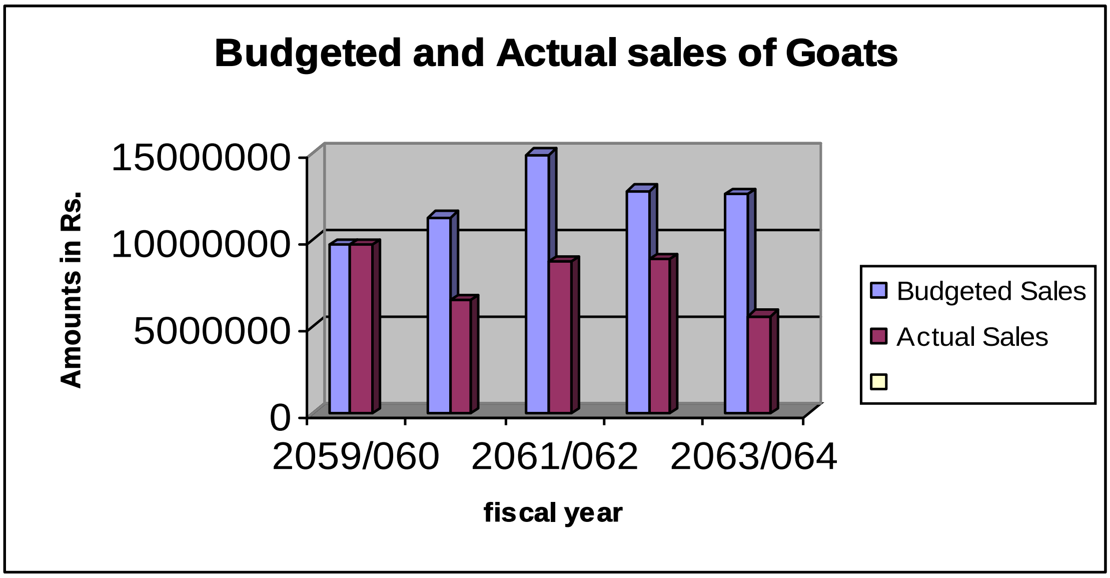
FY	Budgeted Sales	Actual Sales	Achievements (%)
2059/060	97,61,000	97,25,816	99.63
2060/061	1,13,14,000	64,99,386	57.44
2061/062	1,4902,000	87,25,517	58.55
2062/063	1,28,16,000	88,84,195	69.32
2063/064	1,26,18,000	56,40,320	44.70

Source: Appendix 1&2.

The table shows that there is no realistic sales plan for goats. It can be seen from the table that there is a great variation in the actual and budgeted sales. The plan made for sales of goats seemed to be very ambitious. In the fiscal year 2059/060 the actual sales of goat was nearly equal to the budgeted sales. The achievement was nearly cent percent. The planning was very good during this fiscal year but immediately after this year there was a sharp declined in the actual sales nearly by 40% in comparison to the budgeted sales. The following table is shown in bar diagram to understand more clearly.

Graph 2

Budgeted and Actual sales of Goats



Calculation of mean and standard deviation

The following table shows mean, standard deviation, co-efficient of variation and correlation co-efficient to analyze the relationship between the actual sales with the budgeted sales. The summarized results of these statistical tools are presented below. The detailed calculation is in **Appendix -4.**

Table: 8

Calculations of statistical tools

Particulars	Budgeted sales (X)	Actual sales (Y)
Mean ($\bar{X}$, $\bar{Y}$)	1,22,82,200	78,95,047
Standard Deviation (σ)	17,05,884.05	15,52,512.33
Co-efficient of Variation	13.88%	19.66%
Correlation coefficient	-0.0996	
Probable error of correlation (P.E, r)	0.2986	

The above table shows that the budgeted sales are more deviated from the actual sales. There is no consistent between the actual and budgeted sales. From the above table it is also noticed that the co-efficient of variation of actual sales (19.66%) is slightly larger than the budgeted sales (13.88%). That means the budgeted sale is less variable or uniformly distributed than the actual sale which is more variable or less uniformly distributed. This signifies the poor planning of NFC.

To analyze the degree of relationship between the budgeted and actual sales, Karl Pearson's Correlation of Co-efficient statistical tool was used. It is the most widely used statistical tool for calculating the correlation co-efficient between the two variables X and Y. It is generally denoted by 'r'. The above table shows that the Correlation co-efficient (r) between budgeted sales and actual sales is -0.0996. To calculate 'r', budgeted sale was assumed to be independent variable denoted by X and actual sale was assumed to be dependent variable denoted by Y. The value of 'r' which is -0.0996 signifies that there is high degree of negative correlation between the budgeted and actual sales.

The probable error P.E(r) of Correlation Coefficient is an old measure to determine the reliability of the value of Karl Pearson coefficient of correlation. It is used to test whether the calculated value of sample correlation coefficient is significant or not.

- If r < 6* P.E (r), the value of r is not significant,
- If r > 6*P.E (r), the value of r is significant

In the above table the value of 'r' is -0.0996 which is lower than 6 X P.E (r) {6 X 0.2986=1.7918}. It means the value of r is not significant. The actual sales will not go in the same direction as budgeted sales. There will be fluctuation in the actual sales.

Estimation of Actual Sales of goats of 2064/065

Another statistical tool which is used to know the relation of variation of one series with the other series is regression analysis. Regression analysis determines the nature and the strength of relationship between two variables. Least square method is the best method of regression analysis to analyze the actual sales and to estimate the future likely sales for a given time.

Table: 9

Least Square method

FY	Actual Sales (Y) in Amounts	X (base year 2061/062)	X^2	XY
2059/060	97,25,816	-2	4	-1,94,51,632

2060/061	64,99,386	-1	1	-64,99,386
2061/062	87,25,517	0	0	0
2062/063	88,84,195	1	1	88,84,195
2063/064	56,40,320	2	4	1,12,80,640
	$\sum Y$=3,94,75,234	$\sum X$=0	$\sum X^2$=10	$\sum XY$= -57,86,183

The equation of straight line of Yon X is given by,

$Y = a + b X$

Where, b = slope of the regression line which measures the change in Y per unit change in X.

X= Time factor

This equation will give the future trend line equation. Two normal equation is considered to find the value of 'a' and 'b'.

$\sum Y = na + b\sum X$ ……………i

$\sum XY = a\sum X + b\sum X^2$ …………..ii

By solving these two equations the value of 'a' and 'b' is obtained as follows;

$$a = \frac{\sum Y}{N} = \frac{39475234}{5} = 7895047$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{-5786183}{10} = -578618.3$$

Substituting the value of 'a' and 'b' in the equation Y= a + bX, the trend line equation is,

Y= 7895047 – 578618.3 X

The trend line of NFC is Rs. 7895047- 578618.3X. That means the sales will decrease by Rs 578618.3 every year if the sales of past trend continuous in the future. By using this trend equation it can be estimated that the sales of the fiscal year 2064/065. The value of 'X' will be 3 (base year being 2061/062=0).

Actual Sales of the FY 2064/065 = 7895047-578618.3 * 3

= Rs. 61,59,192

It shows that the sales of goats in FY 2064/065 of NFC will be of Rs 6159192. Likewise the sales of other coming fiscal years also can be calculated.

4.1.1.3 Percentage of Rice, Goats and Other Items on Total Sales

Rice and Goats are the items of sales of NFC. The main item that NFC deals with is rice. More than 90% of the total transaction is related to the rice. It also sales other items such as wheat, maize, sugar, salt etc. The table shows the percentage of rice and goats to overall sales.

Table: 10

Percentage of Rice, Goats and Other items to Overall Sales

Year	Total sales	Sales of rice	%	Sales of goats	%	Sales of other items	%	Total%
2059/060	369446541	358376029	**97**	9725816	**2.63**	1344696	**0.36**	**100**
2060/061	392593678	306918464	**78.17**	6499386	**1.65**	79171724	**20.17**	**100**
2061/062	331545382	320030872	**96.52**	8725517	**2.63**	2781190	**0.84**	**100**
2062/063	491624782	479118493	**97.45**	8884195	**1.81**	2513360	**0.51**	**100**
2063/064	615086227	606030213	**98.52**	5640320	**0.92**	3415694	**0.56**	**100**

Source: Appendix-1

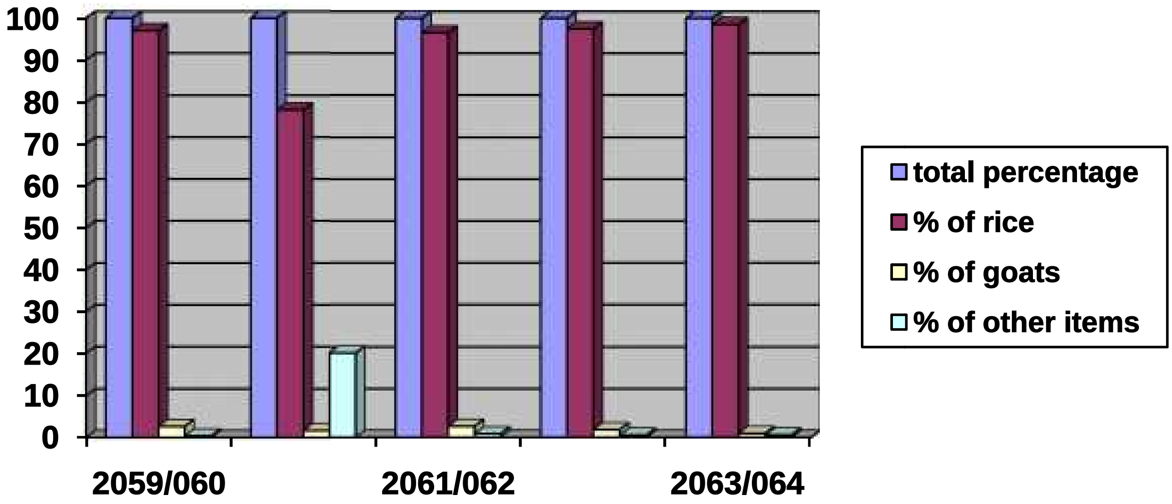
The above table shows that the rice contributes almost 98 % in overall sales transactions of NFC. That means NFC is directly related to the transactions of rice only. The sales of other items are negligible in comparison to sales of rice. Rice constituted 97%, 78.17%, 96.52%, 97.45%, and 98.52% sales in the FY 2059/060, 2060/061, 2061/062, 2062/063 and 2063/064 respectively.

Similarly, goats constituted 2.63%, 1.65%, 2.63%, 1.81%, and 0.92% in the FY 2059/060, 2060/061, 2061/062, 2062/063 and 2063/064 respectively. And other items constituted 0.36% in the FY 2059/060, 20.17% in the FY 2060/061, 0.84% in the FY 2061/062, 0.51% in the FY 2062/063, and 0.56% in the FY 2063/064.

The above data is presented in bar diagram for more clarity.

Graph: 3

Sales Percentage of rice, goats and other items to overall sales.



4.1.2 Inventory Plan

Inventories are the assets available for the creation of revenue either directly through their sale such as finished goods or indirectly by their use such as raw materials. Inventories are the stock of finished goods or raw materials remained in the store for the smooth and continuous supply whenever and wherever required. There should not be more stocks than needed which cause high handling cost and not even low which will hamper in the effective and smooth running of the organization. Hence, inventory is the cushion between sales and production for manufacturing companies while it's a cushion between a sales and purchase for non-manufacturing organization like NFC. Inventory investment, inventory level, inventory policies and control depend upon the nature of organization.

Organization like NFC has to be more careful in inventory management. NFC stores food grains in different parts of the country in its godown. NFC has enough godowns to store food grains. There are 166 godowns all over Nepal which has a storage capacity of 97370 metric ton. NFC has to store adequate amount of food grains because for the natural calamities, acute shortage of food grains in different part of the country and for other reasons. Another important reason for storing the food grains by NFC is storage of food grains in "SAARC FOOD SAFETY STORE". Nepal has to store 4000 metric tons of food grains out of total 2, 40,580 metric tons. These stocks are stored in 5 different godwons located in Terai and Kathmandu. The following table shows the opening and closing inventory amounts of NFC from the fiscal year 2059/060 to 2063/064.

Table: 11

Opening and Closing Stock

(in Rs.)

Fiscal Year	Opening Stock	Closing Stock
2059/060	31,39,56,948	26,53,40,252
2060/061	26,53,40,252	28,65,25,886
2061/062	28,65,25,886	41,97,32,948
2062/063	41,97,32,948	41,27,01,158
2063/064	41,27,01,158	56,08,52,732

4.1.3 Purchase Budget

In non-manufacturing companies instead of converting raw material into finished goods the products are directly purchased and sold in the market in the same form. Therefore a merchandising business does not make raw material purchase budget, direct labor and factory overhead budget. They only make a purchase expense budget.

Purchase = sales + ending inventory – opening inventory

While making purchase expense budget NFC considers the following purchase related activities;

a) Procurement of food grains: NFC procures food grains either directly from the farmers or from the registered cooperatives or merchant. They procure by means of tendering from local market. NFC procures food grains from India, Bangladesh and they also procure from Japan, Thailand, and America as donation.

b) Product line consideration: NFC mostly purchases rice. They purchase different grades of rice like Aruwa mota, Usina mota to high grade of rice like Sona Mansuli, Basmati and Indian Fine rice. There are more than 15 different types of rice that NFC deals with. Apart from rice NFC also purchase other items like Goats, Wheat, Maize, Sugar, Flour etc.

c) Policy of Purchasing: NFC has a policy of purchasing of food grains from the primary and open market. There are many depot established in the country for purchase of food grains. A purchasing committee is made for purchasing.

The members in the purchase committee are as follows;

Table: 12

Position	Authorized Member
Chairman	CDO of the concerned district
Member	Representative of ADO of the concerned district.
Member	Chairperson of chamber of commerce of the concerned district.
Member	Chairman of consumer forum of the concerned district.
Member	Chief of NFC, zonal branch office.
Member	Representative of district farmer committee recommended by DAO.

4.1.3.1 Purchase Budget of Rice

The following table shows the actual and budgeted purchase of rice of NFC from the fiscal year 2059/060 to 2063/064. The detailed purchase is in **Appendix-5 & 6.**

Table: 13

Budgeted and Actual Purchase of Rice

(in Rs.)

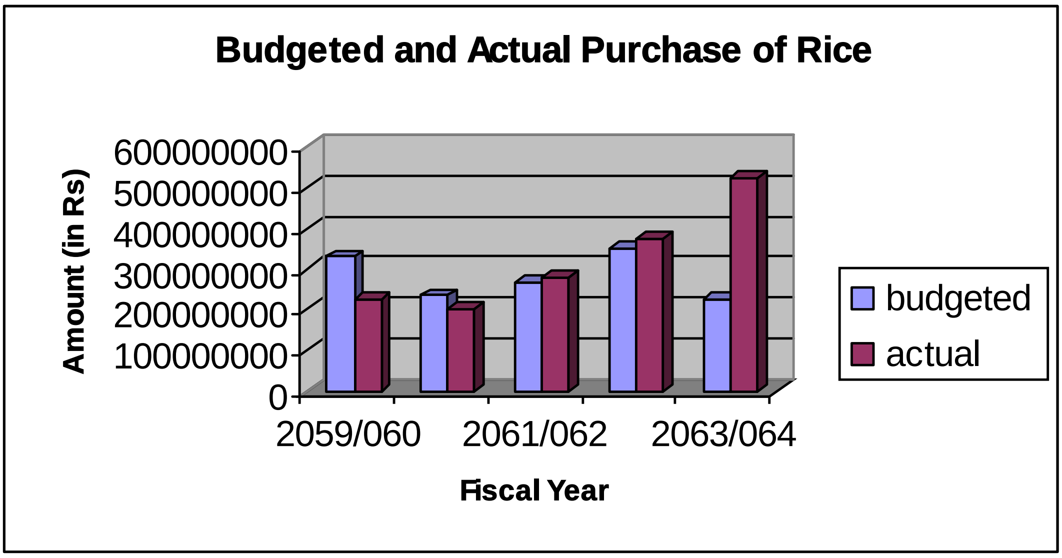
FY	Budgeted	Actual	Achievements (%)
2059/060	33,00,00,000	22,56,94,798	68.39
2060/061	23,42,50,000	20,01,13,686	85.42
2061/062	26,93,50,000	28,13,72,349	104.46
2062/063	34,98,00,000	37,48,79,269	107.16
2063/064	22,67,00,000	52,47,27,835	231.46

Source: Appendix -5&6

The above table shows the purchase budget of rice. The actual purchase exceeded the budgeted purchase in the FY 2061/062 to 2063/064 which was a good result. The budgeted purchase exceeded the actual purchase in the year 2059/060 and 2060/061. The achievements were highest 231.46% in the FY 2063/064 and lowest in the FY 2059/060. There is a great variation between the actual and budgeted purchase of rice which signified the poor planning in purchase of rice. The above data is presented in diagram.

Graph: 4

Budgeted and Actual Purchase of Rice



Calculation of mean and standard deviation

The below table shows the arithmetic mean, standard deviation, co-efficient of variation, correlation coefficient and probable error of correlation coefficient of budgeted and actual purchase of rice. The summarized results of these statistical tools are given below. The detailed calculation is shown in **Appendix-7.**

Table: 14

Calculation of different statistical tools

	Budgeted Purchase (X)	Actual Purchase (Y)
Arithmetic mean ($\bar{X}$, $\bar{Y}$)	282020000	321357587
Standard Deviation (σ)	49797616	118046008
Co-efficient of Variation	17.65%	36.73%
Correlation Coefficient (r)	0.8766	
Probable Error of correlation coefficient (P.E of r)	0.0698	

The above table shows the co-efficient of variation of the budgeted purchase of rice is 17.65% which is lower than the co-efficient of variation of actual purchase (36.73%). This shows that the budgeted purchases are more homogenous or uniformly distributed than actual purchases which are more heterogeneous.

Correlation of co-efficient is determined by widely used statistical tool "Karl Pearson's Correlation Coefficient". Correlation coefficient is denoted by 'r'. For calculating 'r' budgeted purchase was assigned X (independent variable) and actual purchases was assigned Y (dependent variable). The value of r is 0.8766. This shows that there is high degree of positive correlation between budgeted and actual purchase.

The probable error of the coefficient of correlation is used to test whether the calculated value of sample correlation co-efficient is significant or not. The calculated value of P.E (r) is 0.0698.

The value of 'r' is greater than 6x P.E(r) (6* 0.0698= 0.419). This means the value of 'r' is significant.

Estimation of Actual Purchase of Rice of 2064/065

Another statistical tool which is used to know the relation of variation of one series with the other series is regression analysis. Regression analysis determines the nature and the strength of relationship between two variables. Least square method is the best method of regression analysis to analyze the actual purchase and to estimate the future likely purchase for a given time.

Table: 15

Calculation of Least Square Trend

FY	Actual Purchase (Y) in Amounts	X (base year 2061/062)	X^2	XY
2059/060	22,56,94,798	-2	4	-45,13,89,596

2060/061	20,01,13,686	-1	1	-20,01,13,686
2061/062	28,13,72,349	0	0	0
2062/063	37,48,79,269	1	1	37,48,79,269
2063/064	52,47,27,835	2	4	1,04,94,55,670
	∑Y=1,60,67,87,937	∑X=0	$\sum X^2$=10	∑XY= 77,28,31,657

The equation of straight line of Yon X is given by,

Y = a + b X

Where, b = slope of the regression line which measures the change in Y per unit change in X.

X= Time factor

This equation will give the future trend line equation. Two normal equation is considered to find the value of 'a' and 'b'.

$\sum Y = na + b\sum X$ ……………i

$\sum XY = a\sum X + b\sum X^2$ …………..ii

By solving these two equations the value of 'a' and 'b' is obtained as follows;

$$a = \frac{\sum Y}{N} = \frac{1606787937}{5} = 321357587$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{772831657}{10} = 77283165.7$$

Substituting the value of 'a' and 'b' in the equation Y= a+ bX, the trend line equation is,

Y= 321357587 +77283165.7 X

The trend line of NFC is Rs. 321357587+77283165.7X. That means the purchases will increase by Rs 77283165.7 every year if the purchases of past trend continuous in the future. By using this trend equation the purchase of the fiscal year 2064/065 can be estimated. The value of 'X' will be 3 (base year being 2061/062=0) for the fiscal year 2064/2065.

Actual Purchase of the FY 2064/065 = 321357587+77283165 * 3

= Rs. 55,32,07,082

It shows that the purchase of rice in FY 2064/065 of NFC will be of Rs 55,32,07,082. Likewise the purchase of other coming fiscal years also can be calculated

4.1.3.2 Purchase Budget of Goats

The table shows the budgeted and actual purchases of goats and achievements in percentage.

Table: 16

Budgeted and Actual Purchase of Goats

(in Rs.)

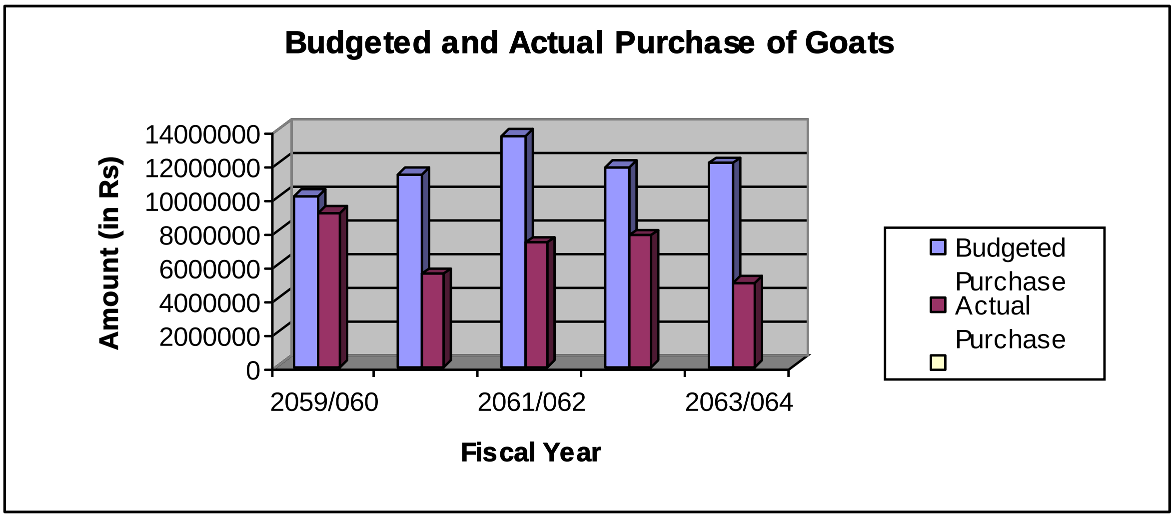
FY	Budgeted Purchase	Actual Purchase	Achievement (%)
2059/060	1,00,15,000	90,65,165	90.51
2060/061	1,13,37,000	54,58,921	48.15
2061/062	1,36,04,000	72,74,855	53.47
2062/063	1,17,18,000	77,37,101	66.02
2063/064	1,19,94,000	49,53,167	41.29

Source: Appendix 5&6

The above table shows that the achievement was high in the FY 2059/060 and low in the FY 2063/064. There is no consistency in the actual sales. The achievement was very low than the expected value except in the FY 2059/060 which was 90.51%. This shows the planning of NFC is very poor. The above table is shown in graph.

Graph: 5

Budgeted and Actual Purchase of Goats



The above graph clearly shows that the actual purchase of goats was nearly equal to the budgeted purchase in the FY2059/060. There was a great difference in actual and budgeted purchase in the FY 2063/064.

Calculation of arithmetic mean, standard deviation, co-efficient of variation, correlation coefficient and probable error of correlation coefficient.

The below table shows the value of arithmetic mean, standard deviation, coefficient of variation, correlation coefficient and probable error of the budgeted and actual purchase of goats. The detailed calculation is in **Appendix-8.**

Table: 17

Calculations of Statistical Tools

Particulars	Budgeted Purchase (X)	Actual Purchase (Y)
Arithmetic Mean ($\bar{X}$, $\bar{Y}$)	1,17,33,600	68,97,842
Standard Deviation (σ)	36,54,400	15,09,704
Co-efficient Variation	31.14%	21.88%
Correlation coefficient	-0.0708	
Probable error of correlation coefficient.(P.E r)	0.3001	

The arithmetic mean of the budgeted purchase was Rs. 11733600 and actual purchase was Rs. 6897842. Similarly standard deviation of budgeted purchase is 365400 and actual purchase is 1509704.

Co-efficient variation is 31.14% for the budgeted purchase and 21.88% for the actual purchase. That is C.V of budgeted purchase is higher than actual purchase. That means actual purchase is more uniformly distributed or more homogeneous than budgeted purchase.

Correlation coefficient ‘r’ is calculated to be -0.0708 which shows that there is high degree of negative correlation between budgeted and actual purchase.

The value of ‘r’ (-0.0708) is found to be less than 6x P.E ‘r’ (i.e. 6*0.3001=1.800). That means the value of r is definitely insignificant.

Calculation of Actual Purchase of Goats of 2064/065

Another statistical tool called regression analysis of least square method can be used to analyze the trend of actual purchase and to estimate the future possible purchase for a given time. Time is and important factor which determines the future purchase. This time series relationship can be expressed in terms of straight line trend by least square method. A line fitted by the method of least squares is the line of best fit.

Table: 18

Calculation of least square trend

FY	Actual Purchase (Y) in Amounts	X (base year 2061/062)	X^2	XY
2059/060	90,65,165	-2	4	-1,81,30,330
2060/061	54,58,921	-1	1	-54,58,921
2061/062	72,74,855	0	0	0
2062/063	77,37,101	1	1	77,37,101
2063/064	49,53,167	2	4	99,06,334
	∑Y=3,44,89,209	∑X=0	$\sum X^2=10$	∑XY= -59,45,816

The following formula has been used to determine the regression equation. The straight line trend equation is given by,

Y= a + b X

Where, b = slope of the regression line which measures the change in Y per unit change in X.

Two normal equations are solved to get the value of constants 'a' and 'b' according to least squares method.

$\sum Y = na + b\sum X$ ……….. i

$\sum XY = a\sum X + b\sum X^2$ ………. ii

By solving these two equations (i &ii) the value of a and b is determined and found to be,

$$a = \frac{\sum Y}{N} = \frac{34489209}{5} = 6897841.8$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{-5945816}{10} = -594581.6$$

Substituting the value of 'a' and 'b' in the equation Y= a + bX, the trend line equation is,

Y = 6897841 - 594581 X

The trend line of NFC is Rs 6897841 - 594581X. That means the purchase will decrease by Rs 594581 every year if the purchase of past trend continuous in the future. By using this trend equation it can be estimated the purchase of goat for the fiscal year 2064/065. The value of 'X' will be 3 (base year being 2061/062=0).

Actual Purchase of goat for the FY 2064/065 = 6897841 - 594581 * 3

= Rs. 51,14,098

It shows that the purchase of goat in FY 2064/065 of NFC will be of Rs 51,14,098.

4.1.3.3 Purchase Budget of Paddy

NFC regularly purchases paddy from the terai districts. It purchases paddy from Rajapur, Mahendranagar, Banke and Bardiya districts. The following table shows the actual and budgeted purchase of paddy.

Table: 19

Budgeted and Actual Purchase of Paddy

(in Rs.)

FY	Budgeted Purchase	Actual Purchase	Achievement (%)
2059/060	1,60,00,000	1,52,387	0.952
2060/061	6,75,00,000	88,81,988	13.15
2061/062	4,90,00,000	72,67,094	14.83
2062/063	4,50,00,000	23,06,987	5.126
2063/064	4,92,00,000	8,85,296	1.80

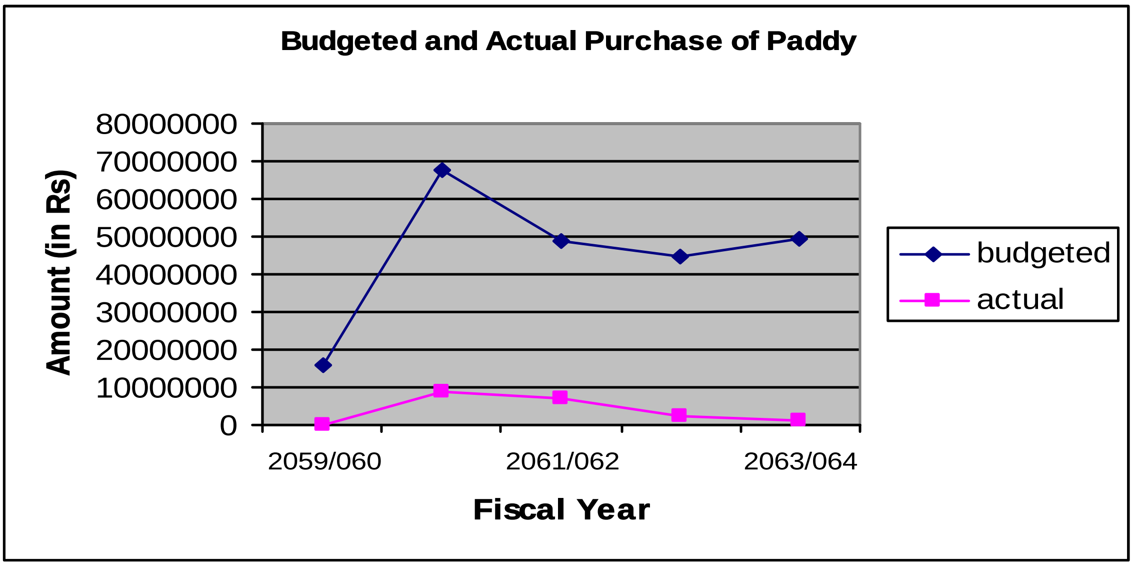
Source: Appendix 5&6

The table shows that the purchase of paddy was not as expected. The budgeted figure was far more than that of actual purchase figure. This shows the bigger negligence of NFC management while planning. In the fiscal year 2059/060 the achievement was below 1% and in the fiscal year 2063/064 the achievement was 2%. And the actual purchase figure shows no consistency.

The above figure is shown in the graph to understand it more precisely.

Graph: 6

Actual and Budgeted Purchase of Paddy.



The above graph shows that the budgeted purchase is not consistent and the lines show that the relation between the budgeted and actual purchase is moderately correlated because when the budgeted figure is increasing actual figure is also increasing similarly when the budgeted figure is decreasing then the actual is also decreasing This can be proved by calculating the different statistical tools. Detailed calculation is shown in **Appendix-9.**

Table: 20

Calculation of different statistical tools

Particulars	Budgeted purchase (X)	Actual purchase (Y)
Mean ($\bar{X}$, $\bar{Y}$)	4,53,40,000	39,00,150
Standard Deviation (σ)	1,66,15,125	35,14,992
Co-efficient of variation	36.64%	90.12%
Correlation coefficient	0.758	
Probable error	0.128	

The coefficient of variation for the budgeted purchase is 36.64% which is low comparable to the actual C.V which is 90.12%. Thus a high C.V shows that the actual purchase is less uniformly distributed or more heterogeneous than the budgeted purchase. Similarly the Karl Pearson coefficient ‘r’ is 0.758 which show high degree of positive correlation.

4.1.4 Administrative Expense Budget

Administrative expenses include those expenses other than manufacturing and distribution. They are incurred in the responsibility centers that provide supervision and service to all function of the enterprises rather than in the performance of any one function. In other words, administrative expenses are those expenses which are not assigned in product but without those expenses product are not possible to produce. It includes large portion of fixed cost than variable cost.

NFC prepares the administrative budget every year. All office expenses, indirect expenses and overhead expenses are included in the administrative expenses. The following table shows the administrative budget of NFC. The detailed actual and budgeted administrative expenses are shown in **Appendix-10 & 13.**

Table: 21

Administrative Expense Budget

(in Rs.)

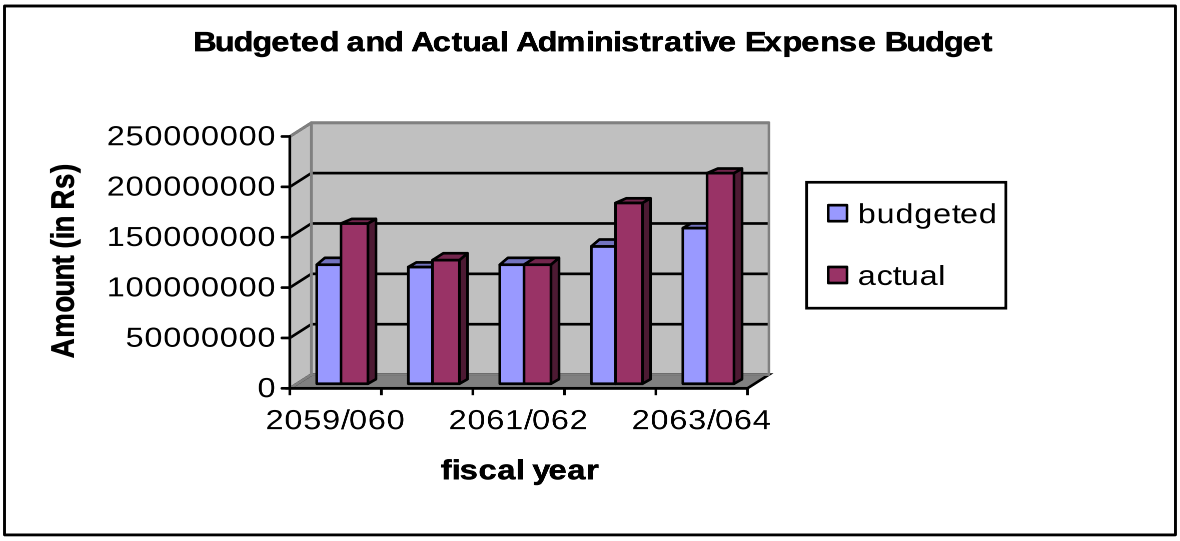
FY	Budgeted administrative expenses	Actual Administrative Expenses	Achievements (%)
2059/060	11,93,60,050	15,90,66,051	133.26
2060/061	11,57,10,165	12,40,23,907	107.18
2061/062	11,98,13,854	11,97,91,049	99.98
2062/063	13,74,50,000	17,98,61,210	130.85
2063/064	15,50,00,000	20,84,62,695	134.49

The above table of administrative expense budget shows that the actual expense is very high as compared to the budgeted expense except in the fiscal year 2061/062 where the budgeted and actual expense is nearly same. The high actual expense is not good for the corporation. The budgeted expense is increasing linearly every year whereas there is fluctuation in actual expense. In the first three fiscal year 2059/060, 2060/061 and 2061/062 the expense decreased which was a good result but soon after that the expenses increased. The achievements were 133.26%, 107.18%, 99.98%, 130.85% and 134.49% in the fiscal year 2059/060, 2060/061, 2061/062, 2062/063, and 2063/064 respectively.

The above budgeting figure can be more specified through the following graph.

Graph: 7

Budgeted and Actual Administrative Expense Budget



4.1.5 Selling and Distribution Expense Budget

Selling and distribution expenses include all those expenses related to selling, distribution and delivery of products to customers. It is a significant portion of total expenses. Distribution expenses affect the profit of the firm. Expenses like promotion expense, research & development expense are not considered by the NFC. Advertising expenses are considered in administrative expense budget. The table below shows the actual selling and distribution expenses of NFC.

Table: 22

Actual Selling and Distribution Expenses

(in Rs.)

FY	Distribution Expenses	Sales Commission	Total selling and distribution expenses
2059/060	18,24,31,299	16,87,405	18,41,18,705
2060/061	18,69,84,249	26,263	18,70,10,512
2061/062	21,79,37,288	58,380	21,79,95,668
2062/063	23,71,61,450	18,12,960	23,89,74,410
2063/064	34,34,62,549	26,11,782	34,60,74,331

Budgeted and Actual Selling and Distribution expenses

The table below shows the budgeted and actual selling and distribution expenses of NFC. The achievement is shown in percentage. High percentage of achievement is not in favor of corporation whereas low achievement percentage is favorable for the corporation. The detailed description is made in **Appendix-11.**

Table: 23

Budgeted and Actual Selling and Distribution Expense

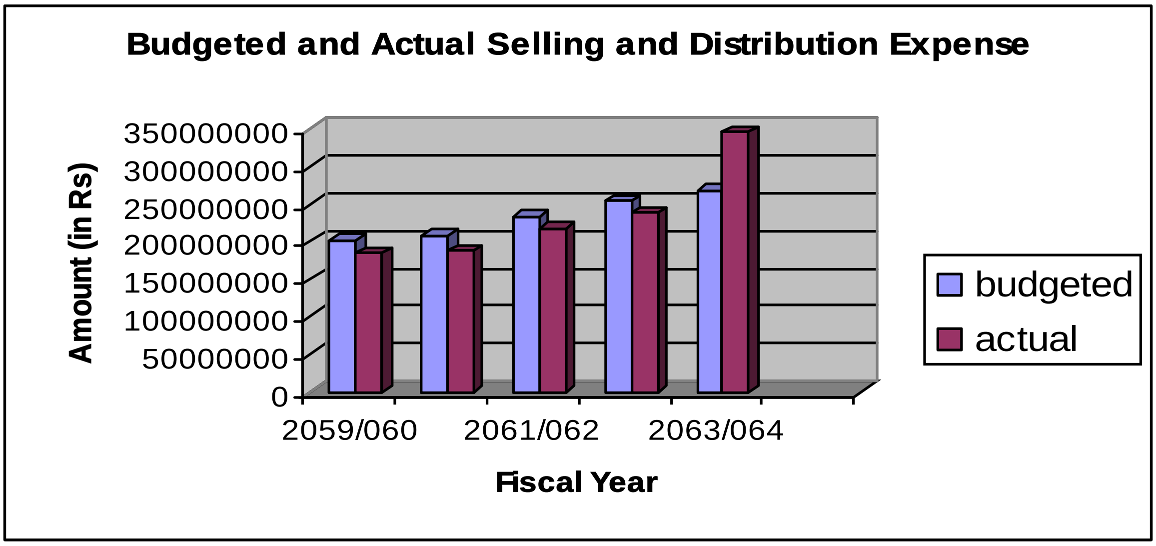
(in Rs.)

FY	Budgeted	Actual	Achievement (%)
2059/060	20,26,50,000	18,41,18,705	90.85
2060/061	20,78,39,000	18,70,10,512	89.97
2061/062	23,44,31,000	21,79,95,668	92.98
2062/063	25,38,40,000	23,89,74,410	94.14
2063/064	26,87,60,000	34,60,74,331	128.76

The actual selling & distribution expenses are lower than that of budgeted except in the fiscal year 2063/064. That means the corporation has able to manage the expenses in fiscal year 2059/060 to 2062/063. But in 2063/064 the actual expenses has exceeded the budgeted figure which reflects the poor planning of NFC. This figure is shown in the graph for clear view.

Graph: 8

Actual and Budgeted selling and distribution Expenses



4.2 Analysis of Financial Position of NFC:

Effective planning and control are central to enhancing enterprise value. The planning should be good and the good plan must be related to the firm's existing strengths and weakness. The strength must be understood if they are to be used for proper advantage and the weakness must be recognized if corrective action is to be taken.

Financial analysis helps to diagnose strength and weakness in a firm's performance in quantitative relations. It is the most essential factor to know the performance of the organization with present actual situation of the organization. It is a science and an art.
Financial condition of NFC is tried to find out with different financial ratios. Financial analysis involves the three broad groupings:

A. Performance Measures
B. Operating Efficiency Measures
C. Financial Policy Measures

4.2.1 Performance Measures

4.2.1.1 Profitability Ratios: It measures management's effectiveness by the returns generated on sales and investment.

4.2.1.1.1 Gross Profit Margin Ratio: - The most common ratio in operating analyses is the gross profit margin. The gross profit ratio expresses the relationship between the gross profit and sales. This ratio indicates the degree to which the selling price of goods sold per unit may decline without resulting in losses from operation to the firm. A high gross profit margin ratio to sales is a sign of good management. A relatively low ratio is definitely a danger signal. Gross profit margin ratio can be calculated by the following formula:

$$\text{Gross Profit Margin Ratio} = \frac{\text{Gross profit}}{\text{Sales}}$$

Table: 24

Comparative Gross Profit Margin Ratio

(in Rs.)

Year	Gross profit	Sales	Ratio
2059/060	8,88,90,303	36,94,46,541	0.240
2060/061	(2,56,37,486)	39,25,93,679	(0.065)
2061/062	86,16,461	33,15,45,382	0.026
2062/063	(8,01,68,819)	48,98,11,823	(0.163)
2063/064	(8,76,86,514)	61,24,74,445	(0.143)

The above table shows the poor gross profit margin ratio of NFC. It shows the worse situation of NFC. The table shows the worst situation in the year 2060/061, 2062/063 and 2063/064. In these years the profit margin ratio is in negative that means they are in loss in this year. In the year 2059/060 and 2061/062 there is slightly improvement but the result is not satisfactory. Even in this year also the ratio is far below 1. This indicates the poor results of NFC.

4.2.1.1.2 Net Profit Margin Ratio: This ratio tells how much profit a company can make for every rupee of sales. This ratio measures the overall profitability of the firm by establishing relationship between net profit and sales. The relationship between net profit and sales indicates management's ability to operate the business with sufficient success not only to recover the cost of production, operating expenses of business and cost borrowed fund but also leave a margin of reasonable compensation to the owners for providing their capital at risk. Higher the company's profit margin compared to the competitors, the better the company is. A high net profit margin would enable the firm to withstand adverse economic condition and a low margin will have opposite implication. The ratio is calculated by dividing net profit after tax and interest by sales.

Net profit margin ratio = Net income / Sales

Table: 25

Net Profit Margin Ratios

(in Rs.)

Years	Net income	Sales	Ratios
2059/060	(12,51,02,334)	36,94,46,541	(0.3386)
2060/061	(3,02,73,857)	39,25,93,679	(0.0771)
2061/062	4,85,51,627	33,15,45,382	0.1464

2062/063	(5,85,11,162)	49,16,24,782	(0.1190)
2063/064	3,61,55,463	61,50,86,228	0.0587

From above table it is noticed that the profit margin ratio is not only low but is in negative most of the year. The company has operated most of the years in loss. In the fiscal year 2059/060, 2060/061 and in 2062/063 the NFC was in loss. In the year 2061/062 and 2063/064 we can see the slight improvement but again the change is very small. In this year the company has able to create the profit. Hence, the corporation is better in this year.

4.2.1.1.3 Return on Total Assets: This ratio measures the productivity of the assets. It measures the return on all the firm's assets after interest and taxes. Return on assets tells an investor how much profit a company has generated for each 1 rupee in assets. Higher the ratio higher is the return on the assets used in the business thereby indicating effective use of the resources available and vice-versa. Return on assets is calculated by following formula,

ROA = Net income / Total Assets

Table: 26

Comparative Return on Total Assets

(in Rs.)

FY	Net Profit	Total Assets	Ratio
2059/060	(12,51,02,334)	90,41,60,411	(0.1383)
2060/061	(3,02,73,857)	89,78,28,614	(0.0337)
2061/062	4,85,51,628	1,02,39,39,122	0.0474
2062/063	(5,85,11,162)	1,04,6,33,380	(0.0557)
2063/064	3,61,55,463	1,15,48,14,909	0.0313

In the fiscal year 2059/060, 2060/061 and 2062/063 the ratio is negative while in the fiscal year 2061/062 and 2063/64 the ratio is positive but very low. This indicates that NFC has not been able to generate profit from its available assets in full scale. Higher the ratios better is the corporation capability of utilization of the assets thus it shows poor managements of NFC.

4.2.1.1.4 Return on Equity: ROE measures the return earned on the owners' investment in the firm. It reveals how much profit a company earned in comparison to the total amount of shareholders equity. Higher ratio or percentage reveals the efficient use of owner's investment and vice-versa. ROE can be calculated by the following formula;

ROA= Net Profit / Shareholder's Equity

Table: 27

Return on Equity Ratio

(in Rs.)

FY	Net Income	Equity	Ratio
2059/060	(12,51,02,334)	99,04,95,035	(0.1263)
2060/061	(3,02,73,857)	99,04,95,035	(0.0305)
2061/062	4,85,51,628	99,04,95,035	0.0490
2062/063	(5,85,11,162)	99,04,95,035	(0.0590)
2063/064	3,61,55,463	99,04,95,035	0.036

Average ROE= (0.0261)

The comparative ratio from above table shows that the ROE is very weak in NFC. Only in the fiscal year 2061/062 and 2063/064 the ratio is somewhat good in comparison to the other fiscal year where the ratios are in negative trend. The overall data shows the very poor condition of corporation. In comparison to the amount of shareholder's investment the corporation is not able to generate the profit creating the shareholder's investment at risk. The average ROE is 0.0261 which is negative.

4.2.2 Operating Efficiency Measures

4.2.2.1 Inventory Turnover Ratio: Inventory turnover helps to maintain a certain level of inventory to meet the requirement of the business. This ratio indicates whether the investment in inventory is efficiently used or not. This ratio is used to measure the efficiency of sales of the organization,

A high stock turnover indicates efficient management of inventory, because more frequently the stocks are sold, the lesser amount of capital is required to finance the inventory. On the contrary, a low stock turnover indicates over investment in stock, poor quality of goods, low profits as compared to total investment and inefficient inventory. Thus, higher the ratio, more times a year the firm is turning over its inventory. The following formula is used to calculate the inventory turnover ratio;

Inventory Turnover Ratio = Sales (net) / Inventory (closing)

Or, Inventory Turnover Ratio = Cost of Goods Sold / Average Inventory

Table: 28

Inventory Turnover Ratio

(in Rs.)

FY	Sales	Inventory	Ratio
2059/060	36,94,46,541	26,53,40,252	1.392
2060/061	39,25,93,679	28,65,25,886	1.370
2061/061	33,15,45,382	41,97,32,948	0.789
2062/063	49,16,24,782	41,27,01,158	1.191
2063/064	61,50,86,227	56,08,52,732	1.096

The table shows a satisfactory result in inventory turnover except in the fiscal year 2061/062 which have low ratio as compared to other fiscal year. The low inventory turnover figure indicates lack of effective inventory management. The corporation‘s investment in inventories in FY 2059/060 has been more productive in terms of generating annual sales. In the fiscal year 2059/060 the NFC has converted its stock into sales 1.592 times faster than in the fiscal year 2061/062 only 0.789 times. The ratio is 1.370, 1.191 and 1.096 in the fiscal year 2060/061, 2062/063 and 2063/064 respectively.

4.2.2.2 Total Assets Turnover Ratio: The total asset turnover reflects the efficiency of management investment in each of the individual asset items. This ratio indicates the extent to which the investment in total assets contributes towards sales. Higher the ratio the more effective is the utilization of assets in revenue generation. The ratio is determined by dividing sales by total assets. Formula for the ratio is given below;

Total Assets Turnover Ratio= Sales / Total Assets

Table: 29

Total Assets Turnover Ratio

(in Rs.)

FY	Sales	Total Assets	Ratio
2059/060	36,94,46,541	90,41,60,410	0.4086
2060/061	39,25,93,679	89,78,28,614	0.4372
2061/062	33,15,45,382	1,02,39,39,122	0.3238
2062/063	49,16,24,782	1,04,96,33,380	0.4684
2063/064	61,50,86,227	1,15,48,14,909	0.5326

Average Ratio= 0.4341

The above table shows that in the fiscal year 2063/064 the assets are more properly utilized in revenue generation. The ratio is highest in this year (0.5326). In the fiscal year 2061/062 the assets are less properly utilized in revenue generation. The ratio is lowest in this fiscal year. The ratio is in increasing from 2059/060 but decreased in the fiscal year 2061/062 and is again increasing in next two fiscal years. The average ratio is 0.4341 which is satisfactory.

4.2.2.3 Fixed Asset Turnover Ratio: The fixed asset turnover ratio indicates the extent to which the investments in fixed assets contribute toward sales. This ratio measures the efficiency with which the firm is utilizing its investment in fixed assets. Higher the fixed assets turnover ratios better the performance of business and lower ratio indicates inefficient utilization of available fixed assets. In this fixed assets investment is not considered. Fixed asset turnover ratio is calculated as:

Fixed Asset Turnover Ratio= Sales / Net fixed assets

Table: 30

Fixed Assets Turnover Ratio

(in Rs.)

FY	Sales	Fixed Asset	Ratio
2059/060	36,94,46,541	18,37,55,349	2.0105
2060/061	39,25,93,679	16,89,88,401	2.3231
2061/062	33,15,45,382	16,37,78,694	2.0243
2062/063	49,16,24,782	15,51,88,510	3.1679
2063/064	61,50,86,227	15,01,30,645	4.0970

Average ratio=2.7245

Generally the ratio is in increasing order except there is slightly fluctuation from the trend in fiscal year 2061/062. Fiscal year 2063/064 has the highest ratio which is 4.0970 and the corporation is in very good condition in this year. The lowest ratio is in the fiscal year 2059/060 which is 2.0105. The overall ratio in the table shows satisfactory utilization of the fixed assets. The average ratio is 2.7245 which are good.

4.2.3 Financial Policy Measures: Two major types of financial policy ratios are considered.

4.2.3.1 Leverage Ratios: Leverage ratios measures the degree to which total assets are financed by owners compared with financing provided by the creditors.

4.2.3.2 Liquidity Ratios: Liquidity ratio measures the short term loan paying ability of the firm. It measures the ability of the firm to meet its maturing obligations. It gives a picture of a company's short term financial situation or solvency. Short term lenders first glance the liquidity position for deciding to grant or not the credit.

4.2.3.1 Leverage Ratios

4.2.3.1.1 Debt-Equity Ratio: Debt-equity ratio measures the relative claims of creditors and owners against the assets of the firm. It is a test of long term solvency of the firm. Debt-equity ratio indicates the relationship between debt and equity. In other words it measures how much money a company could safely borrow over long periods of time. It gives the assurance of protection to the long term creditors. Lower the debt –equity ratio better the condition of firm, higher the debt-equity ratio higher the chance of solvency. Generally debt-equity ratio of over 40-50% should be looked at more carefully to make sure that there are no liquidity problems. Debt-equity ratio can be calculated as follows;

Debt-Equity Ratio = Total Debt / Shareholder's Equity

Table: 31

Debt-Equity Ratio

(in Rs)

FY	Total Debt	Equity	Ratio
2059/060	97,21,23,223	99,04,95,035	0.981
2060/061	97,81,32,912	99,04,95,035	0.987
2061/062	1,04,36,43,563	99,04,95,035	1.053
2062/063	1,10,46,39,733	99,04,95,035	1.115
2063/064	1,15,16,48,769	99,04,95,035	1.162

Average ratio = 1.0596

The above table shows higher debt-equity ratio. All the fiscal year have more than minimum required ratio. The ratio is in increasing trend. Fiscal year 2063/064 has the highest ratio and the fiscal year 2059/060 has the lowest ratio. A high debt- equity ratio indicates greater contribution at a firm's financing by debt holders than those of equity holders which is not a good sign for the corporation. Every year the debt is increasing. This will create great risk for the NFC.

4.2.3.1.2 Debt Assets Ratio: Debt assets ratio shows the relationship between the total debts and total assets of a firm. It measures the percentage of the firm's assets financed by creditors. The lower the ratio, the greater the protection afforded creditors in the event of liquidation. The formula for calculating debt-equity ratio is as follows;

Debt- assets ratio = Total liabilities / Total Assets

Table: 32

Comparative Debt-Assets Ratio

(in Rs.)

FY	Total Liabilities	Total Assets	Ratio
2059/060	97,21,23,223	90,41,60,410	1.0751

2060/061	97,81,32,912	89,78,28,614	1.0894
2061/062	1,04,36,43,563	1,02,39,39,122	1.0192
2062/063	1,10,46,39,733	1,04,96,33,380	1.0524
2063/064	1,15,16,48,769	1,15,48,14,909	0.9972

Average debt assets ratio =1.0466

The above table shows the relationship between the total liabilities and total assets of different fiscal year. Lower the ratio, more fruitful for the company. The overall data shows NFC is at greater risk since the ratio is higher. At FY 2063/064 NFC is in less riskier position. The corporation has highest ratio in fiscal year 2060/061.

4.2.3.1.3 Interest Coverage Ratio: The interest coverage ratio (also called the "times interest earned ratio") is determined by dividing earnings before interest and taxes (EBIT) by the interest charges. This ratio indicates the ability of a company to pay annual interest payments out of its profits. Failure to meet such obligations can bring legal action by the creditors, possibly resulting in bank-ruptcy. Generally interest charges should cover six or seven times.

TIE ratio = EBIT / Interest charge

Table: 33

Interest Coverage Ratio

(in Rs.)

FY	EBIT	Interest charge	Ratio
2059/060	(7,85,43,272)	4,65,59,061	(1.6869)
2060/061	89,75,886	3,92,49,743	0.2286
2061/062	8,38,40,610	3,52,88,982	2.3758
2062/063	(2,57,39,508)	3,27,71,653	(0.7854)
2063/064	5,75,97,273	2,14,41,810	2.6862

From the above table we can notice that the overall ratio could not reach the standard point which is six or seven times. The worst situation NFC faced was in fiscal year 2059/060 and 2062/063 where the ratio is in negative. In the fiscal year 2061/062 and 2063/064 NFC is in good condition where the ratio is nearly 3.

4.2.3.2 Liquidity Ratios

4.2.3.2.1 Current Ratio: The current ratio is computed by dividing current assets by current liabilities. It is a test of a company's financial strength. It indicates the extents to which the claims of short –term creditors are covered by assets that are expected to be converted to cash in a period roughly corresponding to the maturity of the claims. In other words, it measures the availability of current assets for meeting current liabilities. The current ratio 2:1 i.e. current assets double the current liabilities, is regarded as the standard ratio. Higher ratio indicates that the firm is in liquid and has ability to pay its current obligations in time as and when they become due. And in other hand, lower current ratio represents that the liquidity position of the firm is not good and the firm face difficulty in payment of current obligations in time.

Current Ratio = Current Assets / Current Liabilities

Table: 34

Comparative Current Ratio

(in Rs.)

FY	Current Assets	Current Liabilities	Ratio
2059/060	71,12,01,761	97,21,23,224	0.7315
2060/061	71,96,36,913	97,81,32,913	0.7357
2061/062	85,09,57,128	1,04,36,43,564	0.8153
2062/063	88,52,41,570	1,10,46,39,733	0.8013
2063/064	99,54,80,964	1,15,16,48,769	0.8643

The above table shows that the current ratio of NFC is very low than the standard one. That means the NFC is not capable of paying the short-run debt by the availabilities of its current assets. NFC was in poor condition in the fiscal year 2059/060 whereas the condition is increasing little by little in fiscal year 2060/061 to fiscal year 2063/064.

4.2.3.2.2 Quick Ratio (Acid- Test Ratio): Inventories are typically the least liquid of a firm's assets and the assets on which losses are most likely to occur in the event of liquidation. Therefore, this measure of the firm's ability to pay off short – term obligations without relying on the sale of inventories is important. The purpose of this ratio is to test the ability of the firm for immediate payment of current liabilities. This ratio is calculated by deducting inventories from current assets and dividing the remainder by current liabilities. Ratio 1:1 is considered as standard ratio.

Quick Ratio: Current Assets – Stock / Current Liabilities

Table: 35

Quick Ratio

(in Rs.)

FY	Current Assets	Stock	Current Liabilities	Ratio
2059/060	71,12,01,761	26,53,40,252	97,21,23,224	0.458
2060/061	71,96,36,913	28,65,25,886	97,81,32,913	0.442
2061/062	85,09,57,128	41,97,32,948	1,04,36,43,564	0.413
2062/063	88,52,41,570	41,27,01,158	1,10,46,39,733	0.427
2063/064	99,54,80,964	56,08,52,733	1,15,16,48,769	0.377

Average Quick Ratio =0.4234

The table shows lower Quick ratio. The ratios are in decreasing trend. In the fiscal year 2059/060 the ratio is highest (0.458) and lowest (0.377) in the fiscal year 2063/064. The data shows the low capability of NFC to pay off current liabilities without relying on the sale of inventories.

4.3 Financial Statements

Financial statements are annual documents prepared by the organization. They are prepared for periodical review on the progress made and the results achieved during the period. According to American Institute of certified publics accountants "financial statements are prepared for the purpose of presenting a periodic review or report on the progress by the management and deal with the i) status of the investment in the business and; ii) results achieved during the period under review. Thus, it is a means of conveying to the management, owners and interested outsiders a concise picture of profitability and financial position of the organization. A financial statement generally refers to the income statement (i.e. profit and loss account) and balance sheet. (Juneja, Chawla and Saksena; 2000:290)

4.3.1 Income Statement

Income Statement popularly refers to profit and loss account. It includes trading account and profit and loss account. Income statement shows the cost of production, cost of sale and finally the net operating income and net profit earned or the loss incurred during the year. In short, it shows the profitability and the performance of the business showing revenues and expenses.

NFC being a non manufacturing organization it hardly has a cost of manufacturing like production cost, cost of raw materials, factory overhead cost etc. It directly purchases the finished goods and sold to the customers. The profit and loss account shows how much the firm has earned from selling its product or service, and how much it has paid out in costs.

The NFC while fulfilling its objectives has been running of huge financial loss from the time of establishment. Its total loss till date is Rs.1,13,43,31,574 which is no way recoverable. Even the government donation has not been able to strengthen the financial position of the corporation. The following profit and loss account table shows the profit and loss of NFC of each fiscal year of 2059/060 to 2063/064.

Table: 36

COMPARATIVE PROFIT & LOSS (FROM 2059/060 TO 2063/064)

Particulars	**FY 2059/060**	**FY 2060/061**	**FY 2061/062**	**FY 2062/063**	**FY 2063/064**
Sales Revenues	36,94,46,541	39,25,93,679	33,15,45,382	49,16,24,782	61,50,86,228
Less Sales Commission	(16,87,406)	(26,263)	(58,380)	(18,12,959)	(26,11,782)
Actual Sales (A)	**36,77,59,135**	**39,25,67,416**	**33,14,87,001**	**48,98,11,823**	**61,24,74,446**
Opening Stock	31,39,56,948	26,53,40,252	28,65,25,886	41,97,32,949	41,27,01,158
Add Purchase	23,77,47,162	26,57,52,387	29,99,13,009	38,79,56,945	62,09,76,429
Less Closing Stock	(26,53,40,252)	(28,65,25,886)	(41,97,32,948)	(41,27,01,158)	(56,08,52,733)
Add Transportation Cost	18,24,31,300	18,69,84,249	21,79,37,288	23,71,61,451	34,34,62,550
Add Business Expenses	40,78,189	43,68,018	45,93,587	45,20,656	71,19,717
Cost of Sales (B)	**47,28,73,347**	**43,59,19,020**	**38,92,36,822**	**63,66,70,843**	**82,34,07,121**

Gross Profit (A-B)	**(10,51,14,212)**	**(4,33,51,604)**	**(5,77,49,821)**	**(14,68,59,020)**	**(21,09,32,675)**
Less Administration Expenses	(15,90,66,050)	(12,40,23,907)	(11,97,91,049)	(17,98,61,210)	(20,84,62,695)
Profit (Loss) from Operation	(26,41,80,262)	(16,73,75,511)	(17,75,40,870)	(32,67,20,230)	(41,93,95,370)
Add Income From Investment	35,48,635	38,34,634	36,35,114	39,59,040	44,36,026
Add Income From Business	19,40,04,515	1,77,14,118	6,63,66,272	6,66,90,200	12,32,46,162
Add Profit (Loss) From Sales of Assets	-	21,23,108	69,018	71,909	10,99,791
Income (Loss) Before Donation	**(6,66,27,112)**	**(14,37,03,650)**	**(10,74,57,416)**	**(25,59,99,081)**	(29,06,13,392)
Add Donation From Government	-	16,30,62,607	20,05,72,263	23,85,78,980	35,60,00,000
EBDIT	**(6,66,27,112)**	**1,93,58,957**	**9,31,14,847**	**(1,74,20,101)**	**6,53,86,609**
Less Depreciation	(1,19,16,159)	(1,03,83,071)	(92,61,199)	(83,19,408)	(77,89,334)
EBIT	**(7,85,43,271)**	**89,75,886**	**8,38,53,648**	**(2,57,33,509)**	**5,75,97,275**
Less Interest	(4,65,59,061)	(3,92,49,743)	(3,52,88,982)	(3,27,71,653)	(2,14,41,811)
EBT	**(12,51,02,332)**	**(3,02,73,857**)	**4,85,64,666**	**(5,85,11,162)**	**3,61,55,464**
Less Tax	-	-	-	-	-
EAT (Net Income)	**(12,51,02,332)**	**(3,02,73,857)**	**4,85,64,666**	**(5,85,11,162)**	**3,61,55,464**
Loss Till Last Year	(1,005,151,311)	(1130253645)	(1160527502)	(1111975875)	(1170487037)
Accumulated Profit (Loss)	**(1130253645)**	**(1160527502)**	**(1111962836)**	**(1170487037)**	**(11343311573)**

Source: NFC (Yearly income statement)

The above table shows the profit/loss and accumulated loss for different fiscal year of NFC. The above result has reflects the very poor condition of NFC.

4.3.2 Balance Sheet

A balance sheet is an accounting statement prepared from accounting balances at a given date. It shows the financial position of a business by detailing the sources of funds and the utilization of these funds. A balance sheet shows the assets and liabilities grouped, properly classified and arranged in as specific manner. The balance sheet consists of two halves one half shows the total assets and another half shows the total capital and liabilities. The value is same for both the halves, hence the term balance sheet.

The given table shows the balance figure of total assets and liabilities of fiscal year 2059/060 to fiscal year 2063/064 of NFC.

Table: 37

Balance Sheet (From Fiscal Year 2059/060 to 2063/064)

Particulars	2059/060	2060/061	2061/062	2062/063	2063/064
Assets:					
Fixed Asset	18,37,55,350	16,89,88,401	16,37,78,695	15,51,88,510	15,01,30,646
Investment	92,03,300	92,03,300	92,03,300	92,03,300	92,03,300
Current Assets:					
Material Stock.	26,53,40,252	28,65,25,886	41,97,32,948	41,27,01,158	56,08,52,733
Cash & Stock.	7,98,87,426	7,60,87,098	9,39,35,406	9,41,70,900	13,31,12,389
Prepaid & Advance.	4,58,29,037	4,41,99,909	4,25,33,122	4,22,50,846	3,89,47,807
Cash from business and other.	32,01,45,045	31,28,24,020	29,47,55,651	33,61,18,666	26,25,68,034
Total Asset	**90,41,60,410**	**89,78,28,614**	**1,02,39,39,122**	**1,04,96,33,380**	**1,15,48,14,909**
Capital &Liabilities:					
Share Capital	99,04,95,035	99,04,95,035	99,04,95,035	99,04,95,035	99,04,95,035
Accumulated Profit (Loss)	(1124346196)	(1154620053)	(1106055379)	(1164579587)	(1128424124)
	97,21,23,224	97,81,32,913	1,04,36,43,564	1,10,46,39,733	1,15,16,48,769
Current Liabilities & Provisions. Provisions	6,58,88,347	8,38,20,719	9,58,55,911	11,90,78,199	14,10,95,228
Total Liabilities	**90,41,60,410**	**89,78,28,614**	**1,02,39,39,122**	**1,04,96,33,380**	**1,15,48,14,909**

4.4 Performance Evaluation

4.4.1 Analysis of Variances

A basic feature of performance reports is the reporting of variances between actual results and planned or budget goals. A variance is the difference between actual results and budgeted expectations. Variances can be computed for both costs and revenues. 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 base.

Variance can be both positive and negative, depending upon whether actual result is greater or lesser than standard result. Any deviation from the standard or base amount is interpreted as good or bad, favorable or unfavorable. In common use favorable variance is denoted by the letter “F” and unfavorable variance is denoted by “UF”.

4.4.1.1 Sales Variances

The table shows the sales variances of NFC. If actual sales exceed the budgeted sales then the results is favorable otherwise the result is unfavorable.

Table: 38

Sales Variance Analysis Table

(in Rs.)

FY	Budgeted Sales	Actual Sales	Remarks
2059/060	41,10,28,000	36,94,64,541	UF
2060/061	47,77,64,000	39,25,93,679	UF
2061/062	48,63,93,000	33,15,45,382	UF
2062/063	53,30,14,000	49,16,24,782	UF
2063/064	54,86,68,000	61,50,86,227	F

The above table of sales variance shows actual sales is less than the budgeted sales in the year 2059/060 to 2062/063 but in the fiscal year 2063/064 actual sales exceed the budgeted sales. Thus the condition is unfavorable for NFC in the fiscal year 2059/060 to 2062/063 and favorable in the fiscal year 2063/064.

4.4.1.2 Purchase Variance

Actual expenses that exceeds the budgeted expenses results in unfavorable expense variances and actual expenses that are less than the budgeted expenses results in favorable expenses variance. The table below shows the purchase variance.

Table: 39

Purchase variance Analysis Table

(in Rs.)

FY	Budgeted Purchase	Actual Purchase	Remarks
2059/060	36,09,05,000	23,77,47,162	UF
2060/061	32,82,87,000	26,57,52,386	UF
2061/062	36,26,78,000	29,99,13,009	UF
2062/063	44,20,17,000	38,79,56,945	UF
2063/064	28,45,50,000	62,09,76,429	F

The above table shows the poor planning of NFC. The actual result is lower than the budgeted result except in the fiscal year 2063/064. This result shows that NFC management makes plan in haste. The management is not reviewing its past experiences to formulate new plan. Corporation is not considering the principle of “a good plan is job half done”.

4.5 CVP Analysis (BEP analysis)

CVP analysis is an analytical technique to study the relationship between volume, cost and profit. In CVP analysis we generally include BEP analysis. In BEP analysis there is no profit no loss situation. That means the sales revenues exactly equals to the total cost.

BEP is that point in which the company is running neither in loss nor in profit. Breakeven analysis rests upon the foundation of cost variability i.e. separate identification and measurement of the fixed and variable components of cost.

4.5.1 Segregation of Cost

Cost and expense are often used in the same sense. Cost is defined as and expenditure that is entirely recorded as an asset and becomes an expense when it is used up in the future. And expense is defined as an expenditure that is currently consumed or a cost that has been used up. Thus, for management accounting purposes both are regarded as same sometimes an asset and sometimes an expense. (Welsch, Hilton and Gordon; 2000:303)

Cost can be controllable and non-controllable. In short run all the variable expenses are controllable and all the fixed expenses are non-controllable. Cost or expenses can be segregated into three groups; a) fixed cost, b) variable cost, and c) semi variable cost according to the nature of cost.

As for NFC, it is not segregating its cost into VC, FC and SVC. NFC has not maintained any clear cut boundaries about cost separation. NFC is not practicing CVP analysis hence no segregation of cost. Here for analyzing CVP the cost is segregated into VC, FC and SVC with the help of NFC officials. For segregation of SVC in fixed and variable cost, degree of variability method (DOV) is used i.e. 70:30 ratio.

NFC generally categorizes its expenses as;

a) Administrative expenses
b) Business expenses and
c) Distribution expenses.

Segregation of these expenses (cost) in fixed cost, variable cost and semi variable cost are shown in **Appendix-10, 11 &12**

4.5.2 Terms Used in CVP Analysis

Variable cost: Those cost that change in total, directly with changes in output or volume of work done. Examples of variable cost are direct materials, direct labor etc.

Fixed cost: Those cost that are constant in total, regardless of change in output or volume. Examples of fixed cost are salaries, insurance, depreciation etc.

Semi Variable Cost: Those cost that are neither totally fixed nor variable but possess the characteristics of both costs are called semi- variable cost.

Break Even Analysis: BE analysis is a logical extension of contribution analysis. It is an analytical technique to study the relationship between the sales, volume and profit.

Break-Even Point (BEP): It is that point of sales at which the total revenues or sales equals to total cost.

Contribution Margin: Contribution margin is the difference between the sales revenues and variable cost of production. It contributes towards fixed expenses and profit. Each unit sold provides a certain amount of contribution margin that goes toward the covering the fixed costs.

P/V Ratio: it is an important tool in studying the profitability of a business. It establishes relationship between contribution and the sales value.

Margin of Safety: Margin of safety is the excess of budgeted (or actual) sales over the BE sales volume.

4.5.3 Calculation of BEP

Contribution Margin: contribution margin is the difference between the sales revenue and variable cost. It is calculated as follows;

$$\text{Contribution Margin Ratio} = 1 - \frac{\text{Variable cost}}{\text{Sales}}$$

For FY 2059/060,

$$= 1 - \frac{(24115311+54729390+168085339)}{369{,}446{,}541}$$

$$= 1 - \frac{246{,}930{,}040}{369{,}446{,}541}$$

$$= 1 - 0.6683$$

$$\text{C/M Ratio} = 0.3316$$

$$\text{BEP in Rs:} = \frac{\text{Fixed Cost}}{\text{CM Ratio}}$$

$$= \frac{(134950740+129389316+73740011)}{0.3316}$$

$$= \frac{338{,}080{,}067}{0.3316}$$

$$= \text{Rs. } 1{,}019{,}541{,}818$$

Therefore, the corporation in order to remain in no profit and no loss situation in the fiscal year 2059/060 its sale revenue should reach to the level of Rs 1,019,541,818.

4.6 Findings

On the basis of the study it was found that the PPC was not practiced by the NFC management. NFC despite of its best efforts was not able to generate profit. Instead it was suffering from the debt and is surviving on government subsidy. The financial position of the corporation was not good.

Major findings of the research study are presented below:

- The use of profit planning and control was not practiced by NFC management.
- The planning was very poor. The planning was made on adhoc basis.
- The objectives set by the management were very ambiguous which resulted in the fluctuation in the actual and targeted results.
- There were fluctuations not only in the actual and targeted sales but also in the targeted sales also. The target was very high and sometime the target was very low. There was no linearity in the target figure.
- The management used to sales plan for different food grains item but rice and goats were major sales
- Rice only, constituted the 95% of total transactions.
- Purchase should depend upon sales but there was no relation between the sales and purchase. Purchases were made on personal judgment
- The sale of rice was good. The achievement percentage was more than 75 % average.
- There was high variation on actual sales of rice. That means the actual sales was not as per the targeted sales.
- The actual sale of goat was far less than the budgeted sales which showed the poor sales of goat.
- Purchases were made for short-term. Rice was the major food grains item in the contribution of transactions.
- The corporation has no proper inventory policies. If purchase exceeds the sales then it is considered as inventory.
- The actual purchase of rice was more than the budgeted purchase.
- There was high administrative cost which increased the expenses of NFC. This high expense made the corporation loss.
- NFC did not make flexible budget, cash budget and capital expenditure budget without which it is difficult for NFC to identify the necessities of cash requirement and uses of cash.
- The selling and distribution cost was very high which was another reason for increase of debt.

- The performance of management was not satisfactory. The gross margin ratio, net profit ratio showed the poor performance of corporation. They were below the standard figure.
- The return on asset showed that the corporation was not able to utilize its available resources effectively.
- The liquidity position of NFC was not good. Ratios like current ratio, quick ratio which determines the liquidity position of the NFC showed that the ability of corporation to pay the short term loan was very low. The company was facing difficulty in payment.
- The corporation was at high risk. The amount of debt was increasing every year.
- The interest coverage ratio showed that NFC ability to pay the annual interest expenses by the profit was very low.
- The sales and purchase variance of NFC showed that the condition of NFC was unfavorable.
- The major cause of loss of NFC was due to high administration, transportation expenses and interest on loan.
- Due to difficulty road access, the food grains were transported by air in inaccessible areas which created high expenses.
- NFC has no clear pricing policy. Price was not set by the market competition. It was decided by the government which was low than that of the market which resulted low revenues generation.
- NFC has not practiced segregation of cost into fixed and variable.

Chapter Five
Summary, Conclusion and Recommendations

5.1 Summary:

Profit Planning and control is also known as comprehensive profit planning and control. A budget is a detailed plan of action developed in financial terms for a period of one year. It is an important approach developed to facilitate effective performance of the management process. PPC provides guidelines to management and acts as signal light for the management and enables the management to enforce its policy. It is an important tool in profit oriented organization for facilitating effective performance of the management.

Profit planning or Budgeting simply refers to planning of revenues and cost. Profit plan is divided into two portions, strategic or long –term plan and tactical or short-term plan. Strategic plan is prepared for three or more than three years while tactical plan is prepared for six months to one year time horizon. Planning can be divided into two groups, a) functional plan, and b) financial plan. Functional plan includes sales plan, purchase plan, expense plan etc. and financial plan includes income statement and balance sheet.

The importance of profit planning and control is not limited to manufacturing organization only but is equally important to non-manufacturing or merchandising business also. Thus PPC is the life blood of any organization whether it is large or small, manufacturing or non-manufacturing.

NFC, a public enterprise, is associated with selling and distribution of food grains in the different parts of the country. It was established in 2013 B.S in Mangshir 17 under the full ownership of the government. Nepal faces a problem of food shortage every year. Out of 12 months, the people of remote areas have to face the problem of food shortage for 6 or more than 6 months. Their cultivated crops are not enough to feed them for whole years creating famine, malnutrition in children and other problems. Thus NFC has the responsibility to access the food grains to remote villages and food shortage areas. NFC a sole organization working for the benefit for the poor people is running in loss since the time of its establishment creating uncertainty of its future. To find the reason of its failure in generating income was the main objective of this study.

This study focuses on the use of PPC tool by the management of NFC and its implication s in the planning. This study is also targeted to understand the financial position of the corporation with the help of different statistical and financial tools.

The study has shown that the corporation was in loss till the time of study. And the accumulated loss was very high which was very difficult to recover by the management efforts.

The study was made with the help of secondary and primary data with historical and descriptive approach. The total period of five years, from the fiscal year 2059/060 to 2063/064 was covered in the study. For the study, various functional budgets were considered and financial condition was determined with the help of different financial tools. To make the study more clear and make the data understandable data are tabulated and distributed and diagram and graph were used. The detailed calculation and data were presented in the Appendix at the end of the chapter.

5.2 Conclusions

The introduction of five year development plan in the country in 1956 brought about a significant increase in the governments responsibilities. Different public enterprises were established then after. The government established NFC in the fields of food supply of national endeavor to gain momentum in development processes to promote public welfare. From then on NFC is providing its services throughout the country. From the time of establishment its financial condition is deteriorating. NFC in spite of its best efforts is suffering from a number of internal and external problems in formulating and implementing profit plans. The achievements of NFC are not encouraging as it has committed. The achievement of actual sales has not reached the targeted sale which shows the weak planning management of NFC. Same is the condition in purchase also there is great variation in actual and budgeted purchase. Despite this NFC is also suffering from operating loss due to heavy portion of administration and transportation cost. Financial ratios most are not in favorable situation. The liquidity position of NFC is weak. The profitability of NFC is also not satisfactory. As a whole the economic condition of NFC is very weak.

5.3 Recommendations

From the study and based on the findings of NFC some recommendations are made which could be important for the NFC and other stakeholders who are interested in NFC. Following are some of the recommendations:

- Firstly, NFC has to make short-term and long-term planning to fulfill the goals of the corporation.
- There should be separate department for planning.
- The participatory approach in planning and decision making should be made. Employees of every level should be given participation in planning.
- A thorough analysis of historical data has to be done before planning.
- NFC should allow to deal on other food grains items also for profit generation.
- NFC has to revise its pricing policy. It should let the price set as per the market competition.
- The purchase of food grains should be made by studying the past sales but not on adhoc basis.
- The administrative expenses and transportation expenses should be managed. An extra expense in administrative and transportation should be controlled.
- NFC is giving subsidy in transportation in rice to remote areas for the transporter which has created high cost in transportation. NFC should think for transportation facility to remote areas.
- NFC should identify its strengths and weakness.
- The liquidity position of NFC was very weak. It should utilize its available resources properly.
- The profitability of NFC was also not satisfactory for this NFC should increase in sales.
- NFC has barren land and empty godown all over the country. It can earn revenues from it by leasing or lending. So, it should utilize its idle resources as far as possible.
- NFC has its old vehicles which were not in use. Those vehicles should be sold which helps in profit generation.
- The government should give full authority for decision to NFC.
- The modern rice mill at Mahendranagar and Rajapur should be brought into action as soon as possible which was blown by the Maoist in insurgency period.
- Variance analysis should be made to find out the cause of unfavorable variance and correct them in time.
- NFC should segregate the cost into fixed and variable.

- Political interference in the management of NFC should be avoided.
- The role of government should be promotional one not regulatory one.
- The storage facility should be improved. Due to lack of modern storage facility the stored food grains were wasted in high quantity.
- The main problem in food shortage in remote areas is due to delayed in transportation or difficulties in transporting during monsoon period. If there is well equipped storage facility in remote areas then the food can be transported and kept earlier during difficult situation.

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APPENDIX-1

ACTUAL SALES OF NFC FROM FISCAL YEAR 2059/2060 TO 2063/064

Particulars	FY 2059/2060	FY 2060/061	FY 2061/062	FY 2062/063	FY 2063/064
Goats (A):	**97,25,816**	**64,99,386**	**87,25,517**	**88,84,195**	**56,40,320**
RICE:					
Usina Mota	95,217	1,320	-	10,932	-
Aruwa Mota	10,24,82,757	7,85,29,586	7,27,94,474	4,23,38,914	9,28,58,529
Aruwa Fine	11,67,34,365	13,63,19,072	13,88,56,793	15,32,35,129	17,25,95,217
Indian Super Fine	2,49,956	47,052	5,900	-	90,354
Usina Kaanchi Basmati	-		-	-	-
Aruwa Kaanchi Basmati	43,20,125	79,155	2,13,932	-	-
Aruwa Medium	35,47,225	11,72,722	13,65,223	12,78,995	1,09,604
Indian Fine	4,872	-	2,310	-	-
I.R 22	64,573	-	-	-	-
Sona Mansuli	3,40,01,051	8,14,68,931	5,61,37,155	2,87,39,696	7,05,60,827
Non Basmati Rice	80,69,863	22,72,532	17,568	-	-
Indian Aruwa	1,84,141	31,125	12,600	2,811	2,95,443
American Rice	5,61,82,047	7,452	17441350	10,33,23,896	46,01,384
Japanese Rice	51,61,287	-	-	-	-
Japanese Thai Rice	1,19,08,380	-	1,32,24,451	7,26,18,935	9,83,33,666
Australian Rice	1,50,88,140	7,200	-	-	-
Ram Bilas Rice	56,700	53,26,417	13,44,845	1,63,281	2,345
Basmati Rice	2,25,330	16,55,900	19,93,605	11,08,695	16,86,236
French Aruwa	-	-	1,56,33,318	9,30,757	-
French Sona Mansuli	-	-	9,87,347	2,04,66,546	5,92,803
Sawa Mansuli	-	-	-	3,35,440	44,09,470
Bindeswori	-	-	-	-	16,66,273
Japanese O rice	-	-	-	-	11,98,62,221
Vietnamese Rice (Japan)		-	-	5,56,73,160	3,34,04,008
Indian Usina Rice	-	-	-	-	49,61,831

Total Rice Sales (B):	**358376029**	**306918464**	**320030872**	**479118493**	**606030213**
Other Items:					
Barley	-	-	64,278	-	-
Pulses	-	-	-	-	-
Maize	-	27,072	21,072	-	-
Regular wheat		32,260	41,602	5,59,000	-
Japanese wheat		-	-	-	-
French wheat		7,79,18,165	-	-	-
Kanika	7,004	-	2,11,570	46,321	20,363
Miya	-	-	-	-	-
Sacks (large)	5,87,326	1,87,838	25,176	46,112	35,420
Sacks (small)	3,82,403	8,06,404	9,21,931	16,22,760	23,71,206
Flour (maida)	-	-	-	-	-
Wheat flour	-	-	-	-	-
Bran	9,448	3,300	2,32,839	1,31,653	52582
Bhoos	16,000	-	14,400	55,400	6,905
Paddy Coarse	-	1,58,195	2,43,789	-	-
Container	1,97,105	-	-	-	-
Bags (5 kg)	-	-	-	-	-
Leather	3,240	2,475	3,645	2,250	1,125
Drum	-	-	5,600	500	-
Kerosene	-	-	9,75,180	-	-
Sugar	-	-	-	-	7,52,248
Salt	-	-	-	8,000	-
Indian Milk	-	-	-	-	750
Total other items (C):	**12,02,526**	**7,91,35,709**	**27,61,082**	**24,71,996**	**32,40,599**

Sales in Auction:					
Sacks (large)	63,388	5,411	18,315	16,760	89,572
Sacks (small)	64,542	-	1,733	4,004	23,957
Aruwa Mota Rice	430	5,725	-	70	-
Sona Mansuli	-	-	-	-	-
Indian fine Rice	-	-	-	-	-
Aruwa Medium Rice	-	-	-	-	-
Leather	-	-	-	-	-
Indian Super Fine Rice	11,129	9,090	60	-	-
Non Basmati Rice	1,494	795	-	-	-
Jar / Gallon	1,187	-	-	-	38
Wooden trileg	-	11,700	-	-	-
Indian Aruwa Mota -Rice		3,294		-	-
Drum	-	-	7,802	19,565	-
Japanese American Rice	-	-	-	-	3,982
Tin	-	-	-	645	202
Tray	-	-	-	320	-
Container	-	-	-	-	57,079
Fumation sheet	-	5,005	-	-	265
Total sales in auction (D):	**1,42,170**	**41,020**	**27,910**	**41,364**	**1,75,095**
TOTAL SALES (A+B+C+D)	**369446541**	**392593678**	**331545381**	**491624782**	**615086227**

APPENDIX: 2
BUDGETED SALES OF NFC FROM THE YEAR 2059/060 TO 2063/064

Particulars	FY2059/2060	FY2060/061	FY2061/062	FY2062/063	FY2063/064
Goats: (A)	**9,761,000**	**11,314,000**	**14,902,000**	**12,816,000**	**12,618,000**
Rice:					
Remote Areas:					
a) Mota Rice		152,500,000	163,000,000	164,875,000	177,750,000
Developed areas:					
a) sona mansuli		22,000,000	18,000,000	19,000,000	200,000,000
b) mansuli medium		10,000,000	-	-	-
c) mota		8,250,000	16,000,000	17,000,000	18,000,000
Kathmandu Valley:					
a) mansuli		126,000,000	180,625,000	155,750,000	168,000,000
b) sona mansuli(medium)					
c) basmati		95,400,000	51,000,000	13,300,000	14,700,000
d) sawa mansuli		6,200,000	5,800,000	6,200,000	3,800,000
Rice from donation:		-	-	-	7,000,000
a) thai rice					
b) american rice		-	-	196,680,000	102,900,000
c) Japanese rice		-	-	115,936,000	14,400,000
		-	10,666,000	-	-
Total Rice (B):	**401,267,000**	**420,350,000**	**445,091,000**	**688,741,000**	**526,550,000**
Pulses (C)		4,8000,000	2,400,000		3,000,000
Wheat (D)		20,000,000	24,000,000		6,500,000
Maize (E)		1,300,000	-		
Total Sales (A+B+C+D+E)	**411,028,000**	**477,764,000**	**486,393,000**	**729,694,000**	**548,668,000**

APPENDIX-3

Calculations of different statistical tools for sales of Rice

Years	Budgeted sales (X)	Actual sales (Y)	$x=X-\bar{X}$	$y= Y-\bar{Y}$	x^2	y^2	xy
2059/060	401267000	358376029	-95132800	-55718785	9050249635840000	3104583001876225	5300684029648000
2060/061	420350000	306918464	-76049800	-107176350	5783572080040000	1148676999322500	8150739982230000
2061/062	445091000	320030872	-51308800	-94063942	2632592957440000	8848025184579364	4826307987289600
2062/063	688741000	479118493	192341200	65023679	36995137217440000	4228078830695041	12506732447274800
2063/064	526550000	606030213	30150200	191935399	909034560040000	36839197389289201	5786890666929800
	$\sum X=$ 2481999000	$\sum Y=$ 2070474071	$\sum x=0$	$\sum y=0$	$\sum x^2=$ 55370586450800000	$\sum y^2=$ 54228561405762331	$\sum xy=$ 36571355113372200

$$\bar{X} = \frac{\sum X}{N} = \frac{2481999000}{5} = 496399800$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{2070474071}{5} = 414094814.2$$

$\sum x^2 = 55370586450800000$

$\sum y^2 = 54228561405762331$

$\sum xy = 36571355113372200$

Calculations using different statistical tools:-

A) Budgeted Sales:

$$\text{Mean } (\overline{X}) = \frac{\Sigma X}{N} = \frac{2481999000}{5} = 496399800$$

$$\text{Standard Deviation } (\sigma_x) = \frac{\sqrt{\Sigma x^2}}{\sqrt{N}} = \frac{\sqrt{553705864508000000}}{\sqrt{5}} = 105233631.9$$

$$\text{Co-efficient of Variation (C.V of x)} = \frac{\sigma_x}{\overline{X}} = \frac{105233631.9}{496399800} = 0.21199 \text{ or } 21.20\%$$

B) Actual Sales:

$$\text{Mean } (\overline{Y}) = \frac{\Sigma Y}{N} = \frac{2070474071}{5} = 414094814.2$$

$$\text{Standard Deviation } (\sigma_y) = \frac{\sqrt{\Sigma y^2}}{\sqrt{N}} = \frac{\sqrt{54228561405762331}}{\sqrt{5}} = 104142749.5$$

$$\text{Co-efficient of Variation (C.V of y)} = \frac{\sigma_y}{\overline{Y}} = \frac{104142749.5}{414094814.2} = 0.25149 \text{ or } 25.15\%$$

C) Correlation Co-efficient (r):

$$r = \frac{\sum xy}{N*\sigma_X*\sigma_Y} = \frac{365713551133722000}{5*105233631.9*104142749.5}$$

$$= 0.6674$$

C) Calculation of Probable Error (P.Er):

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

$$= 0.6745 \times \frac{1 - (0.6674)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{0.5545}{\sqrt{5}}$$

$$= 0.6745 \times 0.2480$$

$$= 0.1672$$

APPENDIX-4

Calculations of different statistical tools of sales of goats

Years	Budgeted sales (X)	Actual sales (Y)	$x = X - \bar{X}$	$y = Y - \bar{Y}$	x^2	y^2	xy
2059/060	9761000	9725816	-2521200	1830769	6356449440000	3351715131361	-4615734802800
2060/061	11314000	6499386	-968200	-1395661	937411240000	1947869626921	1351278980200
2061/062	14902000	8725517	2619800	830470	6858637210000	689680420900	2175665306000
2062/063	12816000	8884195	533800	989148	284942440000	978413765904	528007202400
2063/064	12618000	5640320	335800	-2254726	112761640000	5083793844529	-757137326600
	$\sum X =$ 61411000	$\sum Y =$ 39475234	$\sum x = 0$	$\sum y = 0$	$\sum x^2 =$ 14550201970000	$\sum y^2 =$ 12051472789615	$\sum xy =$ -1318920640800

$$\bar{X} = \frac{\sum X}{N} = \frac{61411000}{5} = 12282200$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{39475234}{5} = 7895046.8$$

$\sum x^2 = 14550201970000$

$\sum y^2 = 12051472789615$

$\sum xy = -1318920640800$

Calculations using different statistical tools:-

A) Budgeted Sales:

$$\text{Mean } (\overline{X}) = \frac{\Sigma X}{N} = \frac{61411000}{5} = 12282200$$

$$\text{Standard Deviation } (\sigma_x) = \frac{\sqrt{\Sigma x^2}}{\sqrt{N}} = \frac{\sqrt{14550201970000}}{\sqrt{5}} = 1705884.05$$

$$\text{Co-efficient of Variation (C.V of x)} = \frac{\sigma_x}{\overline{X}} = \frac{1705884.05}{12282200} = 0.1388 \text{ or } 13.88\%$$

B) Actual Sales:

$$\text{Mean } (\overline{Y}) = \frac{\Sigma Y}{N} = \frac{39475234}{5} = 7895046.8$$

$$\text{Standard Deviation } (\sigma_y) = \frac{\sqrt{\Sigma y^2}}{\sqrt{N}} = \frac{\sqrt{12051472789615}}{\sqrt{5}} = 1552512.33$$

$$\text{Co-efficient of Variation (C.V of y)} = \frac{\sigma_y}{\overline{Y}} = \frac{1552512.33}{414094814.2} = 0.1966 \text{ or } 19.66\%$$

C) Correlation Co-efficient (r):

$$r = \frac{\sum xy}{N*\sigma_X*\sigma_Y} = \frac{-1318920640800}{5* 1705884.05* 1552512.33}$$

$$= -0.0996$$

C) Calculation of Probable Error (P.Er):

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

$$= 0.6745 \times \frac{1 - (-0.0996)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{0.990}{\sqrt{5}}$$

$$= 0.6745 \times 0.44277$$

$$= 0.2986$$

APPENDIX-4

Years	Budgeted sales (X)	Actual sales (Y)	$x=X-\bar{X}$	$y= Y-\bar{Y}$	x^2	y^2	xy
2059/060	9761000	9725816	-2521200	1830769	6356449440000	3351715131361	-4615734802800
2060/061	11314000	6499386	-968200	-1395661	937411240000	1947869626921	1351278980200
2061/062	14902000	8725517	2619800	830470	6858637210000	689680420900	2175665306000
2062/063	12816000	8884195	533800	989148	284942440000	978413765904	528007202400
2063/064	12618000	5640320	335800	-2254726	112761640000	5083793844529	-757137326600
	$\sum X=$ 61411000	$\sum Y=$ 39475234	$\sum x=0$	$\sum y=0$	$\sum x^2=$ 14550201970000	$\sum y^2=$ 12051472789615	$\sum xy=$ -1318920640800

Calculations of different statistical tools of sales of goats

$$\bar{X} = \frac{\sum X}{N} = \frac{61411000}{5} = 12282200$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{39475234}{5} = 7895046.8$$

$\sum x^2$= 14550201970000

$\sum y^2$= 12051472789615

$\sum xy$ = -1318920640800

Calculations using different statistical tools:-

A) Budgeted Sales:

Mean $(\bar{X}) = \frac{\Sigma X}{N} = \frac{61411000}{5} = 12282200$

Standard Deviation $(\sigma_x) = \frac{\sqrt{\Sigma x^2}}{\sqrt{N}} = \frac{\sqrt{14550201970000}}{\sqrt{5}} = 1705884.05$

Co-efficient of Variation (C.V of x) $= \frac{\sigma_x}{X} = \frac{1705884.05}{12282200} = 0.1388$ or 13.88%

B) Actual Sales:

Mean $(\bar{Y}) = \frac{\Sigma Y}{N} = \frac{39475234}{5} = 7895046.8$

Standard Deviation $(\sigma_y) = \frac{\sqrt{\Sigma y^2}}{\sqrt{N}} = \frac{\sqrt{12051472789615}}{\sqrt{5}} = 1552512.33$

Co-efficient of Variation (C.V of y) $= \frac{\sigma_y}{Y} = \frac{1552512.33}{414094814.2} = 0.1966$ or 19.66%

C) Correlation Co-efficient (r):

$$r = \frac{\sum xy}{N*\sigma_X*\sigma_Y} = \frac{-1318920640800}{5* 1705884.05* 1552512.33}$$

$$= -0.0996$$

C) Calculation of Probable Error (P.Er):

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

$$= 0.6745 \times \frac{1 - (-0.0996)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{0.990}{\sqrt{5}}$$

$$= 0.6745 \times 0.44277$$

$$= 0.2986$$

APPENDIX: 5

ACTUAL PURCHASE OF NFC FROM FISCAL YEAR 2059/060 TO 2063/064

Particulars	FY 2059/060	FY2060/061	FY2061/062	FY2062/063	FY2063/064
Goats (A):	**90,65,165**	**54,58,922**	**72,74,855**	**77,37,101**	**49,53,167**
RICE:					
Aruwa Fine Rice	8,65,71,099	13,00,35,264	8,02,97,916	13,34,70,932	15,54,38,917
Sona Mansuli Rice	6,20,66,291	2,02,57,062	2,65,11,904	4,31,05,952	8,58,87,577
Aruwa Kaanchi Rice	2,09,440	-	-	-	-
Aruwa Mota Rice	7,21,53,220	4,76,81,914	21,15,240	3,45,65,563	6,82,47,575
Basmati Rice	9,71,940	21,39,445	-	18,46,290	56,62,020
Ram Bilas Rice	37,22,808	-	-	-	-
French Aruwa Mota	-	-	93,86,851	-	-
French Sona Mansuli	-	-	1,78,85,875	-	-
Japanese Rice (Aruwa Mota)	-	-	-	-	-
Japanese Thai Rice	-	-	7,62,43,159	-	12,01,06,102
Sawa Mansuli Rice	-	-	6,89,31,404	8,00,50,350	-
Indian Aruwa Rice	-	-	-	33,11,070	22,85,703
Indian Usina Rice	-	-	-	-	1,61,10,724
Vietnamese Rice (Japan)	-	-	-	-	6,94,58,206
Bindeswori Rice	-	-	-	7,85,29,113	11,010
			-	-	15,20,000
Total Purchase of Rice(B):	**225694798**	**200113685**	**281372349**	**374879270**	**524727834**
Purchase of Other Items:					
Paddy (Coarse)	1,39,104	78,06,977	66,16,993	21,79,629	8,47,783
Paddy (medium)	13,282	10,75,010	6,50,101	1,27,358	37,513
Sutali	32,332	17,881	25,766	6,675	1,321

Maize	-	78,234	-	-	-
Wheat (Regular)	-	45,164	5,64,646	-	-
French Wheat	-	4,73,69,199	-	-	-
Barley	-	-	99,988	-	-
Drum	-	-	35,200	-	-
Herbicides & Insecticides	-	-	6,060	-	-
Kerosene	-	-	9,25,863	-	-
Sacks (large)	12,38,400	21,24,801	-	-	-
Sacks (small)	15,64,080	16,63,512	23,41,188	30,19,713	24,00,486
Salt	-	-	-	7,200	-
Sugar (Indian)	-	-	-	-	3,71,78,025
Milk (Indian)	-	-	-	-	5,08,30,300
Total Purchase of Other items (C):	**2987198**	**60180778**	**11265805**	**5340575**	**91295428**
TOTAL PURCHASE (A+B+C):	**237747162**	**265753386**	**299913009**	**387956946**	**554453611**

APPENDIX: 6

BUDGETED PURCHASE OF NFC FROM THE YEAR 2059/060 TO 2063/064

Particulars	FY2059/060	FY2060/061	FY2061/062	FY2062/063	FY2063/064
Goats (A):	**10,015,000**	**11,337,000**	**13,604,000**	**11,718,000**	**11,994,000**
Rice:					
a) mota	-	68,750,000	74,250,000	165,000,000	-
b) sona mansuli	-	57,000,000	56,000,000	49,500,000	-
c) mansuli	-	103,500,000	134,300,000	129,500,000	-
d) basmati	-	5,000,000	4,800,000	5,800,000	-
Total Rice (B):	**330,000,000**	**234,250,000**	**269,350,000**	**349,800,000**	**226,700,000**
Paddy (C):	16,000,000	67,500,000	49,000,000	45,000,000	49,200,000
Wheat (D)	-	-	20,000,000	24,000,000	5,500,000
Pulses (E)	-	4,200,000	2,100,000	2,250,000	2,500,000
Maize (F)	-	1,000,000	-	-	-
Herbicides/Insecticides	-	438,000	600,000	600,000	600,000
Sacks:					
a) large		9,419,000	1,920,000	2,345,000	2,800,000
b) small	4,890,000	143,000	6,104,000	6,304,000	3,570,000
Total Purchase(A+B+C+D+E+F)	**360,905,000**	**328,287,000**	**362,678,000**	**442,017,000**	**302,864,000**

APPENDIX-7

Calculations of different statistical tools for purchase of Rice.

Years	Budgeted Purchase (X)	Actual purchase (Y)	$x = X - \bar{X}$	$y = Y - \bar{Y}$	x^2	y^2	xy
2059/060	330000000	225694798	47980000	-95662789	2302080400000000	9151369199258521	-4589900616220000
2060/061	234250000	200113686	-47770000	-121243901	2281972900000000	14700083529697801	5791821150770000
2061/062	269350000	281372349	-12670000	-39985238	160528900000000	1598819257916644	506612965460000
2062/063	349800000	374879269	67780000	53521681	4594128400000000	2864570337065761	3627699538180000
2063/064	226700000	524727835	-55320000	203370248	3060302400000000	41359457771581504	-11250442119360000
	$\sum X =$ 1410100000	$\sum Y =$ 1606787937	$\sum x = 0$	$\sum y = 0$	$\sum x^2 =$ 12399013000000000	$\sum y^2 =$ 69674300095520231	$\sum xy =$ -5914209081170000

$$\bar{X} = \frac{\sum X}{N} = \frac{1410100000}{5} = 282020000$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{1606787937}{5} = 321357587$$

$\sum x^2 = 12399013000000000$

$\sum y^2 = 69674300095520231$

$\sum xy = -5914209081170000$

Calculations using different statistical tools:-

A) Budgeted Purchase:

$$\text{Mean } (\bar{X}) = \frac{\Sigma X}{N} = \frac{1410100000}{5} = 282020000$$

$$\text{Standard Deviation } (\sigma_x) = \frac{\sqrt{\Sigma x^2}}{\sqrt{N}} = \frac{\sqrt{12399013000000000}}{\sqrt{5}} = 49797616$$

$$\text{Co-efficient of Variation (C.V of x)} = \frac{\sigma_x}{\bar{X}} = \frac{49797616}{282020000} = 0.1765 \text{ or } 17.65\%$$

B) Actual Purchase:

$$\text{Mean } (\bar{Y}) = \frac{\Sigma Y}{N} = \frac{1606787937}{5} = 321357587$$

$$\text{Standard Deviation } (\sigma_y) = \frac{\sqrt{\Sigma y^2}}{\sqrt{N}} = \frac{\sqrt{69674300095520231}}{\sqrt{5}} = 118046008$$

$$\text{Co-efficient of Variation (C.V of y)} = \frac{\sigma_y}{\bar{Y}} = \frac{118046008}{321357587} = 0.3673 \text{ or } 36.73\%$$

C) Correlation Co-efficient (r):

$$r = \frac{\sum xy}{N*\sigma_X*\sigma_Y} = \frac{-5914209081170000}{5* 49797616* 118046008}$$

$$= -0.2012$$

C) Calculation of Probable Error (P.Er):

$$= 0.6745 \text{ X } \frac{1- r^2}{\sqrt{N}}$$

$$= 0.6745 \text{ X } \frac{1- (-0.2012)^2}{\sqrt{5}}$$

$$= 0.6745 \text{ X } \frac{0.9595}{\sqrt{5}}$$

$$= 0.6745 \text{ X } 0.4291$$

$$= 0.2894$$

APPENDIX-9

Calculations of different statistical tools for purchase of paddy.

Years	Budgeted Purchase (X)	Actual purchase (Y)	$x=X-\bar{X}$	$y= Y-\bar{Y}$	x^2	y^2	xy
2059/060	16000000	159387	-29340000	-3740763	860835600000000	13993307822169	109753986420000
2060/061	67500000	8881988	22160000	4981838	491065600000000	24818709858244	110397530080000
2061/062	49000000	7267094	3360000	3366944	13395600000000	11336311899136	12323015040000
2062/063	45000000	2306987	-340000	-1593163	115600000000	2538168344569	541675420000
2063/064	49200000	885296	3860000	-3014854	14899600000000	9089344641316	-11637336440000
	$\sum X=$ 226700000	$\sum Y=$ 19500752	$\sum x=0$	$\sum y=0$	$\sum x^2=$ 1380312000000000	$\sum y^2=$ 61775842565434	$\sum xy=$ 221378870520000

$$\bar{X} = \frac{\sum X}{N} = \frac{226700000}{5} = 45340000$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{19500752}{5} = 3900150$$

$\sum x^2 = 1380312000000000$

$\sum y^2 = 61775842565434$

$\sum xy = 221378870520000$

Calculations using different statistical tools:-

A) Budgeted Purchase:

$$\text{Mean } (\bar{X}) = \frac{\Sigma X}{N} = \frac{226700000}{5} = 45340000$$

$$\text{Standard Deviation } (\sigma_x) = \frac{\sqrt{\Sigma x^2}}{\sqrt{N}} = \frac{\sqrt{1380312000000000}}{\sqrt{5}} = 16{,}615{,}125$$

$$\text{Co-efficient of Variation (C.V of x)} = \frac{\sigma_x}{\bar{X}} = \frac{16615125}{45340000} = 0.3664 \text{ or } 36.64\%$$

B) Actual Purchase:

$$\text{Mean } (\bar{Y}) = \frac{\Sigma Y}{N} = \frac{19500752}{5} = 3900150$$

$$\text{Standard Deviation } (\sigma_y) = \frac{\sqrt{\Sigma y^2}}{\sqrt{N}} = \frac{\sqrt{61775842565434}}{\sqrt{5}} = 3{,}514{,}992$$

$$\text{Co-efficient of Variation (C.V of y)} = \frac{\sigma_y}{\bar{Y}} = \frac{3514992}{3900150} = 0.9012 \text{ or } 90.12\%$$

C) Correlation Co-efficient (r):

$$r = \frac{\sum xy}{N*\sigma_X*\sigma_Y} = \frac{221378870520000}{5*16615125*3514992}$$

$= 0.758$

C) Calculation of Probable Error (P.Er):

$$= 0.6745 \text{ X } \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.6745 \text{ X } \frac{1 - (0.758)^2}{\sqrt{5}}$$

$$= 0.6745 \text{ X } \frac{0.4254}{\sqrt{5}}$$

$$= 0.6745 \text{ X } 0.1902$$

$$= 0.1283$$

APPENDIX-8

Years	Budgeted Purchase (X)	Actual purchase (Y)	$x=X-\bar{X}$	$y=Y-\bar{Y}$	x^2	y^2	xy
2059/060	10015000	9065165	-1718600	2167323	2953585960000	4697288986329	-3724761307800
2060/061	11337000	5458921	-396600	-1438921	157291560000	2070493644241	570676068600
2061/062	13604000	7274855	1870400	377013	3498396160000	142138802169	705165115200
2062/063	11718000	7737101	-15600	839259	243360000	704355669081	-13092440400
2063/064	11994000	4953167	260400	-1944675	67808160000	3781760855625	506393370000
	$\sum X=$ 58668000	$\sum Y=$ 34489209	$\sum x=0$	$\sum y=0$	$\sum x^2=$ 6677325200000	$\sum y^2=$ 11396037957445	$\sum xy=$ -1955619194400

Calculations of different statistical tools for purchase of goats

$$\bar{X} = \frac{\sum X}{N} = \frac{58668000}{5} = 11733600$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{34489209}{5} = 6897842$$

$\sum x^2 = 6677325200000$

$\sum y^2 = 11396037957445$

$\sum xy = -1955619194400$

Calculations using different statistical tools:-

A) Budgeted Purchase:

$$\text{Mean } (\bar{X}) = \frac{\Sigma X}{N} = \frac{58668000}{5} = 11733600$$

$$\text{Standard Deviation } (\sigma_x) = \frac{\sqrt{\Sigma x^2}}{\sqrt{N}} = \frac{\sqrt{6677325200000}}{\sqrt{5}} = 3654400$$

$$\text{Co-efficient of Variation (C.V of x)} = \frac{\sigma_x}{\bar{X}} = \frac{3654400}{11733600} = 0.3114 \text{ or } 31.14\%$$

B) Actual Purchase:

$$\text{Mean } (\bar{Y}) = \frac{\Sigma Y}{N} = \frac{34489209}{5} = 6897842$$

$$\text{Standard Deviation } (\sigma_y) = \frac{\sqrt{\Sigma y^2}}{\sqrt{N}} = \frac{\sqrt{11396037957445}}{\sqrt{5}} = 1509704$$

$$\text{Co-efficient of Variation (C.V of y)} = \frac{\sigma_y}{\bar{Y}} = \frac{1509704}{6897841} = 0.2188 \text{ or } 21.88\%$$

C) Correlation Co-efficient (r):

$$r = \frac{\sum xy}{N*\sigma_X*\sigma_Y} = \frac{-1955619194400}{5*3654400*1509704}$$

$= \; - 0.0708$

C) Calculation of Probable Error (P.Er):

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

$$= 0.6745 \times \frac{1 - (-0.0708)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{0.9949}{\sqrt{5}}$$

$$= 0.6745 \times 0.4449$$

$$= 0.3001$$

Appendix-10

Segregation of Administrative cost in fixed cost, variable cost and semi variable cost.

Particulars	Nature of cost	**Year2059/060**			**Year 2060/061**			**Year 2061/062**		
		VC	**FC**	**TC**	**VC**	**FC**	**TC**	**VC**	**FC**	**TC**
Salaries	FC	-	4,29,09,475	4,29,09,475	-	41.536,474	41,536,474	-	41,486,083	41,486,083
Vacation allowance	VC	88,88,404	-	88,88,404	5,004,623	-	5,004,623	47,52,513	-	47,52,513
Wages	VC	2,46,640	-	2,46,640	282,940	-	282,940	296,879	-	296,879
Remote Allowance	FC	-	35,12,921	35,12,921	-	3,381,962	3,381,962	-	31,02,919	31,02,919
Health and Treatment Expenses	FC	-	1,12,62,518	1,12,62,518	-	6,869,261	6,869,261	-	68,63,834	68,63,834
Dashain Exp.	FC	-	56,29,838	56,29,838	-	3,472,993	3,472,993	-	34,70,757	34,70,757
Adjustment Allowance	VC	88,55,384		88,55,384	8,416,536	-	8,416,536	80,92,515		80,92,515
Funeral Exp.	FC	-	30,000	30,000	-	40,000	40,000	-	20,000	20,000
Housing Exp.	FC	-	10,000	10,000	-	-	-	-	-	-
Allowance Expenses	VC	12,880	-	12,880	12,000	-	12,000	35,28,788	-	35,28,788
Employees welfare interest exp	FC	-	30,20,744	30,20,744	-	581,426	581,426	-	-	-
Employee Provident fund Exp.	FC	-	42,99,745	42,99,745	-	4,139,264	4,139,264	-	41,24,036	41,24,036
Employee Welfare Fund Exp.	FC	-	10,000,000	10,000,000	-	10,000,000	10,000,000	-	10,000,000	10,000,000
Employee Gratuity Fund	FC	-	43,871,886	43.871,886	-	14,490,095	14,490,095	-	14,951,160	14,951,160
Rent	FC	-	1,955,494	1,955,494	-	2,387,612	2,387,612	-	17,54,229	17,54,229
Repair and Maintenance	SVC (7:3)	270862	632,010	902,872	308,632	720,143	1,028,775	56,8410	1,326,291	18,94,701
Water and Electricity	SVC	1,014,110	434,619	1,448,729	1,002,570	429,673	1,432,243	1,073,689	460,153	15,33,842

	(3:7)									
Fuel Expenses	VC	693,230	-	693,230	750,193	-	750,193	10,05,551	-	10,05,551
TADA	VC	3,014,689	-	3,014,689	2,612,936	-	2,612,936	30,74,457	-	30,74,457
Transportation Exp.	FC	-	-	-	-	-	-	-	-	-
Printing & stationery	SVC (7:3)	245,742	573,397	819,139	270,953	632,223	903,176	281,594	657,051	9,38,645
Abhyagat Exp. *	FC	-	198,348	198,348	-	215,113	215,113	-	245,903	245,903
Software & Computer	FC	-	43,905	43,905	-	57,332	57,332	-	-	-
Auditor’s Fees	FC	-	798,833	798,833	-	337,592	337,592	-	437,980	437,980
Legal Expenses	FC	-	294,049	294,049	-	238,446	238,446	-	195,435	195,435
BOD meeting Exp.	SVC (7:3)	57,074	133,174	190,248	68,304	159,377	227,681	72,662	169,544	242,206
Vehicle Tax	FC	-	79,545	79,545	-	93,927	93,927	-	56,449	56,449
Income Tax	FC	-	70,928	70,928	-	110,512	110,512	-	52,833	52,833
VAT	FC	-	-	-	-	-	-	-	-	-
Bank Charges	FC	-	589,147	589,147	-	226,336	226,336	-	223,765	223,765
Insurance	FC	-	469,169	469,169	-	470,616	470,616	-	432,292	432,292
Telecommunication Exp.	SVC (3:7)	761,174	326,217	1,087,391	816,477	349,919	1,166,396	825,982	353,993	11,79,975
Advertisement	FC	-	27,572	27,572	-	600,398	600,398	-	707,361	707,361
Trainings	FC	-	21,338	21,338	-	133,621	133,621	-	136,482	136,482
Gift and Donation	VC	16,900	-	16,900	63,700	-	63,700	36,500	-	36,500
Newspaper & magazines	FC	-	137,635	137,635	-	135,951	135,951	-	155,054	155,054
Uniforms Exp.	FC	-	14,000	14,000	-	7,000	7,000	-	7,000	7,000
Non durable Goods	SVC (7:3)	26,801	62,537	89,338	38,641	901,635	128,805	36,939	86,192	123,131
Membership Charges	FC	-	6,500	6,500	-	229,100	229,100	-	231,950	231,950
Sub-committee cost	FC	-	227,546	227,546	-	242,496	242496	-	372,947	372,947
Loss on sale of assets	VC	11,421	-	11,421	-	-	-	44	-	44
Discount	FC	-	1,907,907	1,907,907	-	8,150,106	8,150,106	-	393,442	393,442

Other Expenses	FC	-	999,739	999,739	-	3,846,266	3,846,266	-	36,56,341	36,56,341
Items not mentioned			400,000	400,000	-	-	-	-	-	-
TOTAL	-	**24,115,311**	**134,950,740**	**159,066,051**	**19,648,505**	**104,375,402**	**124,023,907**	**23,646,523**	**96,131,478**	**119,778,001**

Segregation of Administrative cost in fixed cost, variable cost and semi variable cost.

Particulars	Nature of cost	**Year2062/063**			**Year 2063/064**		
		VC	**FC**	**TC**	**VC**	**FC**	**TC**
Salaries	FC	-	4,62,94,196	4,62,94196	-	4,20,50,822	4,20,50,822
Vacation allowance	VC	87,23,936	-	87,23,936	61,61,704	-	61,61,704
Wages	VC	4,00,710	-	4,00,710	5,45,524	-	5,45,524
Remote Allowance	FC	-	28,92,184	28,92,184	-	28,26,244	28,26,244
Health and Treatment Expenses	FC	-	77,39,844	77,39,844	-	69,94,369	69,94,369
Dashain Exp.	FC	-	39,84,709	39,84,709	-	35,88,323	35,88,323
Adjustment Allowance	VC	77,94,332	-	77,94,332	67,61,777	-	67,61,777
Funeral Exp.	FC	-	30,000	30,000	-	20,000	20,000
Housing Exp./	FC	-	320,291	320,291	-	2,962,409	2,962,409
Voluntarily retirement expense	FC	-	6,630,180	6,630,180	-	273,987	273987
Allowance Expenses	VC	-	-	-	49,28,206	-	49,28,206
Employees welfare interest exp	FC	-	43,51,457	43,51,457	-	1,75,04,936	1,75,04,936
Employee Provident fund Exp.	FC	-	46,34,123	46,34,123	-	41,84,329	41,84,329
Employee Welfare Fund Exp.	FC	-	1,50,82,870	1,50,82,870	-	5,24,18,898	5,24,18,898
Employee Gratuity Fund	FC	-	4,68,86,639	4,68,86,639	-	2,93,99,491	2,93,99,491
Rent	FC	-	15,47,101	15,47,101	-	21,98,935	21,98,935

Repair and Maintenance	SVC(7:3)	376,095	877,555	12,53,650	765,662	1,786,544	25,52,206
Water and Electricity	SVC 3:7	1,098,679	470,862	15,69,541	1,141,249	489,107	16,30,356
Fuel Expenses	VC	10,17,753	-	10,17,753	11,48,667	-	11,48,667
TADA	VC	30,95,399	-	30,95,399	36,78,412	-	36,78,412
Transportation Exp.	FC	-	-	-	-	-	-
Printing & stationery	SVC(7:3)	281,368	656,525	9,37,893	346,039	807,425	11,53,464
Abhyagat Exp. *	FC	-	2,41,802	2,41,802	-	4,19,175	4,19,175
Software & Computer	FC	-	-	-	-	1,01,570	1,01,570
Auditor’s Fees	FC	-	3,97,414	3,97,414	-	2,91,077	2,91,077
Legal Expenses	FC	-	1,57,309	1,57,309	-	7,94,068	7,94,068
BOD meeting Exp.	SVC (7:3)	66,658	155,534	2,22,192	57,229	133,533	1,90,762
Vehicle Tax	FC	-	90,006	90,006	-	98,730	98,730
Income Tax	FC	-	5,65,688	5,65,688	-	4,33,667	4,33,667
VAT	FC	-	-	-	-	-	-
Bank Charges	FC	-	2,84,510	2,84,510	-	8,12,733	8,12,733
Insurance	FC	-	4,40,505	4,40,505	-	7,87,453	7,87,453
Telecommunication Exp.	SVC (3:7)	811,400	347,743	11,59,143	855,359	366,582	12,21,941
Advertisement	FC	-	6,88,033	6,88,033	-	13,60,648	13,60,648
Trainings	FC	-	1,21,000	1,21,000	-	47,354	47,354
Gift and Donation	VC	34,000	-	34,000	2,84,000	-	2,84,000
Newspaper & magazines	FC	-	1,55,931	1,55,931	-	2,01,997	2,01,997
Uniforms Exp.	FC	-	7,000	7,000	-	24,68,763	24,68,763
Non durable Goods	SVC (7:3)	37,929	88,502	1,26,431	44,593	104,051	1,48,644
Sub-committee cost	FC	-	3,40,074	3,40,074	-	7,72,417	7,72,417
Membership Charges	FC	-	2,23,450	2,23,450	-	2,16,150	2,16,150
Discount	FC	-	47,72,673	47,72,673	-	38,04,259	38,04,259

Other Expenses	FC	-	4,647,236	4,647,236	-	1,024,228	1,024,228
TOTAL	-	**23,738,259**	**156,122,951**	**17,98,61,210**	**26,718,421**	**181,744,274**	**20,84,62,695**

APPENDIX-11
Segregation of selling and distribution cost into variable and fixed cost

Particulars	**Nature of cost**	**Year 2059/060**			**Year 2060/061**			**Year2061/062**		
		FC	VC	TC	FC	VC	TC	FC	VC	TC
Transportation cost	SVC (7:3)	127,701,910	54,729,390	182,431,300	130,888,974	56,095,275	186,984,249	152,556,102	65,381,186	217,937,288
Sales commission	FC	1,687,406	-	1,687,406	26,263	-	26,263	58,380	-	58,380
TOTAL	-	**129,389,316**	**54,729,390**	**184,118,706**	**130,915,237**	**56,095,275**	**187,010,512**	**152,614,482**	**65,381,186**	**217,995,668**

Particulars	**Nature of cost**	**Year 2062/063**			**Year 2063/064**		
		FC	VC	TC	FC	VC	TC
Transportation cost	SVC (7:3)	240,423,784	103,038,765	343,462,549	166,013,015	71,148,435	237,161,450
Sales commission	FC	2,611,782	-	2,611,782	1,812,958	-	1,812,958
TOTAL	-	**243,035,566**	**103,038,765**	**346,074,331**	**167,825,973**	**71,148,435**	**238,974,408**

APPENDIX-12

Segregation of Business Cost into Variable and Fixed Cost.

Particulars	**Nature of cost**	**Year 2059/060**			**Year 2060/061**			**Year 2061/062**		
		FC	VC	TC	FC	VC	TC	FC	VC	TC
Purchase	SVC (3:7)	71,324,149	166,423,013	237,747,162	79,725,716	186,026,670	265,752,386	89,973,903	209,939,106	299,913,009
Load / unload expense	VC	-	1,042,537	1,042,537	-	982,438	982,438	-	502,015	502,015
Storage expense	FC	949,972	-	949,972	1,165,068	-	1,165,068	1,848,299	-	1,848,299
Harvesting expense	VC	-	-	-	-	38,589	38,589	-	21,589	21,589
Mill operating expense	SVC (7:3)	31,879	13,662	45,541	78,441	33,619	112,063	100,474	43,061	143,535
Sales cost (for goats)	SVC (7:3)	668,653	286,565	955,218	510,456	218,766	729,221	605,254	259,394	864,648
Miscellaneous expense	SVC (7:3)	745,646	319,562	1,065,208	748,329	320,713	1,069,042	452,572	193,960	646,532
Herbicides/insecticides cost	FC	19,712	-	19,712	271,594	-	271,594	302,088	-	302,088
Total	**-**	**73,740,011**	**168,085,339**	**241,825,350**	**82,499,604**	**187,620,795**	**270,120,399**	**93,282,590**	**210,959,125**	**304,241,715**

Particulars	Nature of cost	**Year 2062/063**			**Year2063/064**		
		FC	VC	TC	FC	VC	TC
Purchase	SVC (7:3)	116,387,083	271,569,861	387,956,944	186,292,929	434,683,500	620,976,429
Load/ unload expense	VC	-	10,33,355	10,33,355	-	8,22,168	8,22,168
Storage expense	FC	17,38,003	-	17,38,003	14,75,890	-	14,75,890
Harvesting expense	VC	-	-	-	-	-	-
Mill operating expense	SVC (7:3)	95,380	40,877	1,36,257	43,326	18,568	61,894
Sales cost (for goats)	SVC (7:3)	657,149	281,635	9,38,784	546,769	234,330	7,81,099
Miscellaneous expense	SVC (7:3)	380,276	162,975	5,43,251	2,496,412	1,069,891	35,66,303
Herbicides/ insecticides cost	FC	1,31,005	-	1,31,005	4,12,360	-	4,12,360
Total		**117,743,280**	**274,734,319**	**392,477,599**	**188,428,843**	**439,667,300**	**628,096,143**

Appendix: 13

Budgeted Administrative Expense of NFC from the Fiscal Year 2059/060 to 2063/064

Particulars	FY2059/060	FY2060/061	FY2061/062	FY2062/063	FY2063/064
Expense related to employees:					
Salaries					
Provident Fund	69,893,050	70,200,000	75,000,000	80,000,000	85,000,000
Health & Medication	4,700,000	4,500,000	4,400,000	5,000,000	5,000,000
Gratuity	11,400,000	7,400,000	5,988,176	8,000,000	6,500,000
Life Insurance	10,000,000	10,000,000	10,000,000	15,000,000	20,000,000
	10,000,000	10,000,000	10,000,000	15,000,000	20,000,000
Total (A)	**105,993,050**	**102,100,000**	**105,388,176**	**123,000,000**	**136,500,000**
Expense related to Office:					
TADA	3,000,000	2,800,000	3,231,415	3,200,000	5,000,000
Fuels	777,000	785,000	1,004,537	950,000	1,100,000
Printings & Stationary	700,000	953,670	1,031,572	1,000,000	1,200,000
Non-durable gods	125,000	150,854	139,117	150,000	200,000
Repair & Maintenance	1,200,000	1,400,000	753,638	875,000	1,100,000
House Rent	1,100,000	1,093,201	963,377	1,100,000	1,050,000
Water & Electricity	1,600,000	1,553,585	1,637,880	1,725,000	1,750,000
Tele-Communication	1,000,000	1,174,907	1,238,900	1,250,000	1,300,000
Magazines &Newspapers	200,000	167,500	173,823	225,000	225,000
Abhyagat* Expense	250,000	103,141	254,940	275,000	300,000
Miscellaneous Expenses	500,000	1,245,130	1,005,705	900,000	1,000,000
Anniversaries Expense	125,000	132,835	470,581	200,000	200,000
Training & Seminar Expense	350,000	150,000	136,482	300,000	300,000
Advertising Expense	500,000	450,000	877,618	750,000	1,000,000
Other Insurance	600,000	500,000	400,000	400,000	450,000
Auditor's cost	340,000	350.342	411,270	400,000	400,000
BOD meeting Expense	500,000	300,000	421,607	450,000	500,000
Legal Expense	500,000	300,000	273,221	300,000	200,000

Total (B):	**13,367,000**	**13,610,165**	**14,425,678**	**14,450,000**	**18,500,000**
TOTAL (A+B):	**119,360,050**	**115,710,165**	**119,813,854**	**137,450,000**	**155,000,000**

APPENDIX-14
COMPARATIVE PROFIT & LOSS (FROM 2059/060 TO 2063/064)

Particulars	**FY 2059/060**	**FY 2060/061**	**FY 2061/062**	**FY 2062/063**	**FY 2063/064**
Sales Revenues	36,94,46,541	39,25,93,679	33,15,45,382	49,16,24,782	61,50,86,228
Less Sales Commission	(16,87,406)	(26,263)	(58,380)	(18,12,959)	(26,11,782)
Actual Sales (A)	**36,77,59,135**	**39,25,67,416**	**33,14,87,001**	**48,98,11,823**	**61,24,74,446**
Opening Stock	31,39,56,948	26,53,40,252	28,65,25,886	41,97,32,949	41,27,01,158
Add Purchase	23,77,47,162	26,57,52,387	29,99,13,009	38,79,56,945	62,09,76,429
Less Closing Stock	(26,53,40,252)	(28,65,25,886)	(41,97,32,948)	(41,27,01,158)	(56,08,52,733)
Add Transportation Cost	18,24,31,300	18,69,84,249	21,79,37,288	23,71,61,451	34,34,62,550
Add Business Expenses	40,78,189	43,68,018	45,93,587	45,20,656	71,19,717
Cost of Sales (B)	**47,28,73,347**	**43,59,19,020**	**38,92,36,822**	**63,66,70,843**	**82,34,07,121**
Gross Profit (A-B)	**(10,51,14,212)**	**(4,33,51,604)**	**(5,77,49,821)**	**(14,68,59,020)**	**(21,09,32,675)**
Less Administration Expenses	(15,90,66,050)	(12,40,23,907)	(11,97,91,049)	(17,98,61,210)	(20,84,62,695)
Profit (Loss) from Operation	(26,41,80,262)	(16,73,75,511)	(17,75,40,870)	(32,67,20,230)	(41,93,95,370)
Add Income From Investment	35,48,635	38,34,634	36,35,114	39,59,040	44,36,026
Add Income From Business	19,40,04,515	1,77,14,118	6,63,66,272	6,66,90,200	12,32,46,162
Add Profit (Loss) From Sales of Assets	-	21,23,108	69,018	71,909	10,99,791
Income (Loss) Before Donation	**(6,66,27,112)**	**(14,37,03,650)**	**(10,74,57,416)**	**(25,59,99,081)**	(29,06,13,392)
Add Donation From Government	-	16,30,62,607	20,05,72,263	23,85,78,980	35,60,00,000
EBDIT	**(6,66,27,112)**	**1,93,58,957**	**9,31,14,847**	**(1,74,20,101)**	**6,53,86,609**
Less Depreciation	(1,19,16,159)	(1,03,83,071)	(92,61,199)	(83,19,408)	(77,89,334)
EBIT	**(7,85,43,271)**	**89,75,886**	**8,38,53,648**	**(2,57,33,509)**	**5,75,97,275**
Less Interest	(4,65,59,061)	(3,92,49,743)	(3,52,88,982)	(3,27,71,653)	(2,14,41,811)
EBT	**(12,51,02,332)**	**(3,02,73,857)**	**4,85,64,666**	**(5,85,11,162)**	**3,61,55,464**
Less Tax	-	-	-	-	-
EAT (Net Income)	**(12,51,02,332)**	**(3,02,73,857)**	**4,85,64,666**	**(5,85,11,162)**	**3,61,55,464**
Loss Till Last Year	(1,005,151,311)	(1130253645)	(1160527502)	(1111975875)	(1170487037)
Accumulated Profit (Loss)	**(1130253645)**	**(1160527502)**	**(1111962836)**	**(1170487037)**	**(11343311573)**

APPENDIX-15

Balance Sheet (From Fiscal Year 2059/060 to 2063/064)

Particulars	**2059/060**	**2060/061**	**2061/062**	**2062/063**	**2063/064**
Assets:					
Fixed Asset	183755350	168988401	163778695	155188510	150130646
Investment	9203300	9203300	9203300	9203300	9203300
Current Assets:					
Material Stock	265340252	286525886	419732948	412701158	560852733
Cash & Stock	79887426	76087098	93935406	94170900	133112389
Prepaid & Advance	45829037	44199909	42533122	42250846	38947807
Cash from business and other	320145045	312824020	294755651	336118666	262568034
Total Asset	**904160410**	**897828614**	**1023939122**	**1049633380**	**1154814909**
Capital &Liabilities:					
Share Capital	990495035	990495035	990495035	990495035	990495035
Accumulated Profit (Loss)	(1124346196)	(1154620053)	(1106055379)	(1164579587)	(1128424124)
Current Liabilities & Provisions	972123224	978132913	1043643564	1104639733	1151648769
Provisions	65888347	83820719	95855911	119078199	141095228
Total Liabilities	**904160410**	**897828614**	**1023939122**	**1049633380**	**1154814909**