

A Case Study on
IMPACT OF SALES AND PRODUCTION PLAN ON
PROFITABILITY OF BOTTLERS NEPAL LTD.
A THESIS

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RECOMMENDATION

This is to certify that the thesis

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DECLARATION

I here by declare that the work reported on this thesis, entitled "**A Case Study on IMPACT OF SALES AND PRODUCTION PLAN ON PROFITABILITY OF BOTTLERS NEPAL LTD.**" submitted to Faculty of Management, Tribhuvan University, **Shanker Dev Campus**, Putalisadak, Kathmandu, is my original work done in the form of partial fulfillment of the requirements for the Degree of Master of Business Studies (MBS) under the guidance and supervision of **Mr. Prakash Singh Pradhan** of Shanker Dev Campus, Faculty of Management, Tribhuvan University.

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ABBREVIATIONS

BE	Break Even
BEP	Break Even Point
BNL	Bottlers Nepal Limited
BNTL	Bottlers Nepal Tarai Limited
CBEP	Cash Break Even Point
CM	Contribution Margin
Co.	Company
CVP	Cost, Volume, Profit
FC	Fixed Cost
GPM	Gross Profit Margin
NEPSE	Nepal Stock Exchange
NPM	Net Profit Margin
P/V Ratio	Profit Volume Ratio
PE	Public Enterprises
PPC	Profit Planning and Control
RDL	Royal Drug Limited
ROE	Return on Shareholder's Equity
ROA	Return on total Assets
Rs.	Rupees
SPPU	Selling Price per Unit
SWOT	Strength, Weakness, Opportunity and Threat
TC	Total Cost
TCM	Total Contribution Margin
TS	Total Sales
VC	Variable Cost
VCPU	Variable Cost per Unit
WTO	World Trade Organization

CHAPTER - I

INTRODUCTION

1.1. Background of the study

Nepal is a sovereign independent and landlocked country. It is situated in South Asia. The total area of the Nepal is 1, 47,181 sq. km, which is 0.03% of the total world and 0.3% of Asia. Nepal is located between 26^o, 22' to 30^o, 27' north. The average length of Nepal is 885 km, east to West and average breath is about 193 km, north to South. It lies between two powerful countries i.e. China in the North and India in the East West and South. Nepal is 22 times small than India and 65 times than China. Nepal is divided into Eastern region, Central region, Western region, Mid Western region and Far Western region five regions. But according to geographically, it is divided into a) The Himalayan region b) The Hilly region and c) The Terai region as three on the basis of topographical characteristics.

Economic development is backbone of the country. Without economic development, the country has fearsome of losing its existence and identity. The rapid development of Nepal needs development of the industrial sector. There should be adequate industrial infrastructure as well as appropriate technology for development of industrial sector. Industries have not been developing to the extent of expectation in Nepal. The reason for it is the lack of dynamic entrepreneurs. The industrial development process in Nepal started mainly after establishment of Biratnagar Jute mill and Udhayog praised in 1936. People hesitate to invest due to the lack of appropriate knowledge. Unstable political environment is another reason for it .States should create new investment opportunities with minimum facilities.

Some important changes took place in the field of industry after reinstate of democracy in 2046 B.S. Some industries were established from the private sector thereafter. The role which manufacturing industry has been playing in the national economy is marginal but gradually; it is in increasing trend and market has also expanded due to the increment of consumer needs and desires. Several enterprises were established in the public sector during the 60's and 70's with the industrial sector enterprises mainly setup under the financial and technical assistance of bilateral donors. Public enterprises are a kind of state agencies established in order to distribute state resources to the people.

According to Friedman, 'Public enterprise is an institution operating a service of an economic or social character, on behalf of the government. But as an independent legal entity, largely autonomous, though responsible to the public through the government'. (Chandra, 1997:2).

The World Bank Report defines state owned Enterprises as government owned or government controlled economic entities that generate the bulk of their revenues from selling goods and services. The term 'Public Service Corporation' referred to indicate in the USA (World Bank, 1995:4)

The PEs was established to enhance in production, to develop the society and for the welfare of people. But they are not succeeded to meet the goal. Basically, they suffered from poor management, over staffing, political pressure, pressure of donor agency, corruption, huge losses, inadequate planning, lack of contestability, debts. The features of the problems are mostly similar in the nations where PEs are existed, from the second to the seventh plan, Nepal accorded significant priority to Public Sector Undertakings as a vehicle of development. These were envisaged as instruments for production and for carrying out socioeconomic policies in Nepal.

In the context of Nepal, public enterprises in Nepal deserve a crucial role for the socio-economic development of our country. It enjoys a strategic and crucial position in our mixed economic. They have been established in many sectors for overall development of the country with different goals and objectives. Accordingly, BNL has been established under public utility and social sector. There are so many standard accounting tools and techniques used to measure the performance of organization.

1.2 A Brief Introduction of BNL

Bottlers Nepal Limited, Balaju, Kathmandu is one of the manufacturing and processing companies. It is established in 1979 A.D. Under the Company Act 1964 A.D. It is initially started as a private enterprise in 1985 issuing shares to public. It was established with the objective producing and bottling soft drinks under the brand name of Coca Cola Sabco Asia Ltd.

The company also makes and sales soft drinks under the registered trademarks of Coca Cola managed by Dubai based Coca Cola Sabco Asia Ltd. The company is located at Balaju, Kathmandu; in an area covering 10,648 square meters of land and the buildings of the company covers 5,828 squares meters. The company has been launching various types of promotional activities with financial and technical support from the Coca cola Saco Asia Ltd. Dubai.

Share Capital of BNL

The BNL was started with an Authorized Capital of Rs. 30,250,000. In the initial period its paid up capital was Rs. 10, 500,000 of Rs. 100 per share. Now, the company has authorized capital of Rs. 4,30,000,000. issued capital of Rs. 3,70,000,000 and paid up capital of Rs. 1,94,889,000. (BNL Audit Report: 2005/06:11) Bottlers Nepal (Tarai) Ltd. is operated as a subsidiary company of BNL, Balaju. BNL (Tarai) Ltd. was established in 1986 under the Company Act, 1964 with the object of producing and bottling soft drinks under the brand name of Coke, Fanta and Sprite. The company is situated in Chitwan district. It is managed by Coca-Cola Sabco Asia Ltd., Dubai. The installed capacity of plant is 350 bottling per minute. BNTL belongs to 92% (nearly) of equity shares to holding company BNL Balaju. The co. has increased investment on the subsidiary co. by acquiring additional shares from open market. The co.'s equity interest has increased to 91.78% after the new acquisition of shares in BNTL (BNL Audit Report 2005/06). BNL is one of the tops ten companies listed on the NEPSE in terms of market capitalization.

Product Line

BNL produces Coke, Fanta and Sprite in returnable glass bottle as well as non-returnable bottles. Upgrading the product lines, the company has already upgraded its 430 bottles per minute line to produce 175ml. package in returnable glass bottle. Considering the market demand, the co. has also invested in pet line to produce 1.5 liter packages in non returnable bottles. The lines have commenced production and they have start sales of locally manufactured pet since the previous year. So, the company has been able to increase the production efficiency of the plant giving better outputs as compared to the previous year. The company is able to fulfill the market demand with out any production constraints after the installation of new plant (BNL Audit Report 2005/06:13)

1.3 Statement of the Problem

The prime concern of every nation of the world is economic development. The developing countries are facing several problems in the process of economic development. Nepal is not exception to that situation. The majority of people are unable to get even basic facilities. The government alone can't develop the country economy. So the public & private organizations are the pillars of the economic development of the country. The sales of the company was 13.85%, 3.68%, 18.11% and 34.31% in 05/06, 06/07, 07/08, 08/09 respectively which was in increased trend but the profit of the company was -60.15%, 11.51%, 39.94% and 0.77% in 05/06, 06/07, 07/08, 08/09 respectively which was not maintain as per sale's trend . Due to the regular increase in sale, the company was not able to increase the profit according to the sales and lack of integration of activities, less utilization of capacity are the main cause of such companies, So under this study budgeting system especially sales and production budget system will be studied with special emphasis on following question:

- i. Is there a sales and production budgeting system in BNL?
- ii. How is sales and production plan formulated in BNL?
- iii. What are the major problems faced by BNL for sales and production budgeting?
- iv. What role has the sales and production planning played in profit planning and control?

- v. In which major areas of business operation, CVP analysis could be effective for better competitiveness in the market and for better results?
- vi. What are the major difficulties BNL faced in using CVP analysis?

1.4 Objectives of the Study

The main objective of the study is to analyze the sales and production budgeting as a tool to measure effectiveness of profit planning and control of Bottlers Nepal Limited. To achieve this objective, the following objectives were set up:

1. To examine the practice and effectiveness of sales budgeting and production budgeting in BNL.
2. To identify the effect of sales and production budgeting on profitability of Bottlers Nepal Limited.
3. To evaluate the variance between budgeted and actual achievement of Bottlers Nepal Limited.
4. Comparative study of sales and production budgeting of recent five FY 2004/05 to 2008/09
5. To analyze comparative sales, production and profit trends of BNL.
6. To provide suggestion and recommendations of operation of BNL.

1.5 Significance of the study

Sales and production budgeting is very important and crucial tool for every company because it lead an organization to ultimate success. It contributes to improve the profitability as well as overall financial performance of company. Proper sales and production budget minimizing future risk and maximizing the output from the scarce resources and predicts the future. So sales and production budgeting is most important tool in the field of managerial decision making in every business company. This study will be useful to various parties in various ways and those are stated below:

1. It examines the application of sales and production planning of the company.
2. It provides necessary theoretical as well as contemporary situational conceptions to make appropriate financial decision for BNL.

3. It may also help BNL to take corrective measures to the related department of company.
4. It is useful for potential managers, accountant's policy makers, and planners.
5. It also provides literature to the researcher, who wants to perform further research in this field.

1.6 Limitation of the Study

This study is concerned with only sales and production budgeting and its relation with profit plans in Bottlers Nepal Limited. Therefore, this study has the following limitations:

1. The study is based on the assumption that all the data provided to the researcher is true and reliable.
2. The study is mostly based on secondary sources of data from the audit report and various published, unpublished document of BNL
3. This study is based on the response and the data provide by the management of BNL.
4. The study covered the only five fiscal years starting from 2004/05 to 2008/09.

1.7 Scheme of the study

The whole study will be divided into five chapters in order to make easy and understandable. Each chapter deals with specific aspects of the study which will be as follow;

Chapter One: Introduction

This is the first chapter and includes, Background of the study, A Brief Introduction of BNL, Statement of Problem, Objectives of the Study, Significance of the Study, Limitations of the Study, Scheme of the Study

Chapter Two: Review of Literature

The second chapter, review of literature, means reviewing research studies or other pertinent propositions in the related area of the study so that the past studies, their conclusions and deficiencies may be known and further research can be conducted. This chapter deals with the review of available literature. It takes in review of related books, journals, articles and previous unpublished Master Degree Dissertation etc.

Chapter Three: Research Methodology

This chapter contained the research methodology used in this study. It included Research Design, Nature and sources of Data, Period covered, Data Processing Procedure, Financial and statistical tools used for the study.

Chapter Four: Presentation and Analysis of data

The fourth chapter deals with presentation of related data collection from different source and analysis of them, to reach closer to the actual result by using financial and statistical tools and techniques, major findings of the study

Chapter 5 Summary, Conclusions and Recommendations:

This chapter covered Summary, Conclusions and Recommendations of this study.

CHAPTER II

REVIEW OF LITERATURE

2.1 Conceptual Framework

An organization is established to achieve some goals. It has its own objectives. Its objectives should be clearly mentioned to achieve the goals of organization. "In this competitive globalize business age an organization whether it is public or private, profit is essential. Profit is not chance, it is result of successful management. The management of an enterprise requires continuing performances of certain managerial responsibilities collectively are called the function of management. Planning, organizing, staffing, and human resource management, Leading and interpersonal influence and controlling are major functions of management. Planning is process of developing enterprises objectives and selecting future course of action to accomplish them. It reduces uncertainty and provides effective direction to the employee by determining the course of action in advance. Controlling means evaluating the firm's activities against the plan and deciding what should be done if the plan is not being followed" (Lynch and William, 1995:18).

Concept of Profit

Every organization is established to make profit. Success of any organization is primarily measured by profit because it is acid test of individual firm's operation. Those organizations are thought to be a successful, which can generate profit. The existence of all the resources employed in the enterprise is possible only when there is profit. Profit doesn't just happen but it is managed. If a firm cannot make profit, it cannot generate capital for future. Profit is the excess or residual income left after cost of production or the payment of the contractual reward to other for production. But the term profit is controversial and interpreted as thus:

- An economist says that profit is the reward for entrepreneurship for risk taking.
- A labor leader might say that it is a measure of how efficiently labor produced and that it provides a base for negotiating a wage increase.
- An investor will view it as a gauge of the return on his money
- Through the accountants measuring stick, profit is a tangible expression of the goals it has set for the firm.

Thus, economic theories of profit may be put in three broad groups. The first look open profit is the reward for bearing risk and uncertainty, the second view of profit as the consequences of friction and imperfection in the competitive adjustment of economy to dynamic changes; the third see profit as the reward for successful innovation.

Concept of Planning

Profit planning is the central theme of management planning, without proper planning, profit will not just happen. So every activity needs to be systematically planned for profit generation. Profit plan covers all the major aspects of business activities toward the achievement of business objective, which is profit, various functional budgets are the basic tools for proper planning of profit control over them. A profit plan is a financial and narrative expression of the expected result from planning decision. It is called profit plan because it explicitly sets the goals in terms of time for each major segment of entity. Glenn A. Welsch has used the descriptive term comprehensive profit planning and control. Other terms used in the same context are business budgeting, managerial budgeting and budgeting.

Profit planning is a detail plan of action during a period of one year or less. Profit planning helps a firm's financial manager to regulate flow of funds which is his primary concern. (Pandey, 1997:223).

Profit plan is a short-term financial plan. It is an action plan to guide managers in achieving the objective of a firm. A profit plan is a comprehensive and coordinated plan resource of an enterprise for some specific period in future. So, profit planning is a part of an overall planning process and is an area in which, the financial function plays a major role. (Myers, 1995: 250).

Profit plan is a detail expression of the expected result from the planning decision. Profit planning is an important approach developed to facilitate for effective performance of management process like planning, organizing, staffing and controlling. So, it is carried out to fulfill the responsibility of forward thinking and future operation of the organization. Planning is the process of developing

enterprises objectives and selecting a future course of action to accomplish them. It includes.

- Establishing enterprise objectives.
- Developing premises about the environment in which they are to be accomplished.
- Selecting a course of action for accomplishing the objectives
- Initiating activities necessary to translate plans into action, and
- Current re-planning to correct current deficiencies.

(Welsch, Hilton & Gordon, 2006: 5)

Concept of Control

Control is a process of measuring and evaluating actual performance and initiating corrective action. Planning and organizing establish the goals and standards with, which control is implemented. Basically control measures performance by company actual result with planned results and measuring variance above or below the plan.

(Welsch, Hilton & Gordon, 2006: 3)

Control is a function in the management process and one of the prime parts of profit planning and control. As with planning, controlling is performed continuously. Therefore, there is a control process that should be always operating in an enterprise. Controlling consists in checking the performance of activities against the plan, noting deviation from it, and deciding what corrective action if any ought to be taken. Hence controlling is the process of assuring efficient performance to attain the enterprises objectives. It involves:

- Establishing goals and standards
- Comparing measured performance against the establishing goals and standards.
- Reinforcing successes and correcting shortcoming

2.2 Profit Planning and Control

Profit planning and control is an important tool of management. It facilitates the manager to accomplish managerial goals in a systematic way. The management is efficient if it is able to accomplish the objective of the enterprise. It is effective when it accomplishes the objectives with minimum effort and cost. In order to attain long-range efficiency and effectiveness, management must chart out its course of action

in advance. A systematic approach that facilitates effective management performance is profit planning and control or budgeting. (Pandey. I.M, 1994: 285).

In a way a budgetary control system has been described as a historical combination of a goal-setting machine for increasing an enterprises profit and “goal-achieving machine for facilitating organizational coordination and planning while achieving the budgeted targets”. Profit planning and control means the planning of revenue (i.e. increase the revenue) and control the cost (i.e. control the inefficiency of cost). So the planning and control are emphasized in profit planning and control out of five functions of management. These provide base camp for PPC. Profit planning and control program helps the management perform its planning function by developing a strategic (long range) profit plan and a tactical (short range) profit plan. It also helps management perform its control function by providing realistic goals and standards that are implemented and then compared with actual results to measure performance.

Comprehensive profit planning is control is a new term in the literature of business, not a new concept in management. In other terms which can be used in same context, are comprehensive budgeting, managerial budgeting and simply budgeting. The profit planning and control can be defined as process/technique of management that enhances the efficiency of management.

Profit planning and control involves:

- ✓ Developing and applications of board and long range objective.
- ✓ Specification of enterprise goals.
- ✓ Development of strategic profit plan is board terms.
- ✓ Specification of tactical short range profit plan detailed by assigned responsibilities (divisions, departments, projects).
- ✓ Establishment of a system of periodic performance reports detailed by assigned responsibility and
- ✓ Development of follow up procedures.

(Welsch, Hilton & Gordon, 2006: 31)

2.3 Strategic and Tactical Profit Plan

Mainly, two types of profit plans are developed to achieve organizational objectives. One is strategic (long-range) profit plan and other tactical (short-range) profit plan. Strategic profit plan is generally more than one year and tactical profit plan is detailed and encompasses a one-year time horizon the upcoming year. Some concepts about these are summarized as follows:

Strategic Long-Range Planning

Strategic planning is a top management function in which the organization's purpose, mission and overall objectives and policies are developed to position the organization advantageously in its operating environment. It refers to the selection of company objective and the determination of the growth or at least constant and competitive policies that are most likely to accomplish those objectives. It is carried out the highest policy making level of the organization will travel. Management planning and control is the process carried on within the framework established by strategic planning. "Long range 5 to 10 years varying with the enterprise sometimes extended to 10 years. It is one of the most difficult times span involved in planning as many problems in short range planning can be traced to the absence of clear sense of direction and the practice which a comprehensive long-range plan provides. Basically, the long-range planning is more important for broad and long living enterprises. "A long-range planning is closely concerned with the concept of the corporation as a long living institution" (David, 1964:298).The planner must include the following factors in his/her plan from the analysis of available information.

- a. Probable future opportunity
- b. Uncertainty and
- c. Challenges

"Long range planning is the continuous process of making present entrepreneurial (risk taking) decision. Systematically and best possible organizing efforts is need to carry out these decisions and measuring the result of these decisions against the expectations through organized systematic feed back" (Drucker, 1964:165). It is a decision making process. Such decision should be related about:

- ❖ *Determination of goals, objectives and strategies.*
- ❖ *Level and direction of capital expenditure.*
- ❖ *Accession of new sources of funds.*
- ❖ *Organization design and structure etc.*

Tactical Short Term Planning

A tactical planning is done at all level and involves directing the organizations activities to achieve overall strategic objectives with the organization's mission and policies. Standing plans provide consistency and efficiency for non going operations, and single use plans are developed for unique situation. Projects are short term plans designed to achieve objective within large scale programs. Short term plans cover about a year, and are less formal and detailed than long range plans, which usually cover more than three months. "The short range planning is selected to conform to fiscal quarters or years because of the practical need for conforming plans to accounting periods and the some. What arbitrary limitation of the long range to three to five years is usually based as has been indicated on the prevailing belief that the degree of uncertainty over along period makes planning of questionable value" (Horold and Cyric, 1964:45).

2.4 Purpose of Profit Planning and Control

Some purposes for the application of profit planning are:

1. To state the firms expectations in clear and facilitate for attainability.
2. To communicate expectations to all concerned with the management of the firm so that they are understood, supported and implanted.
3. To provide a detail plan of action for reducing uncertainty and for the proper direction of individual and group efforts to achieve goals.
4. To coordinate the activities and efforts in such as way the use of resource in maximized.
5. To provide a means of measuring the performance of individuals and units and to supply information on the basis of which the necessary corrective action can be taken.

There is controversy is term of profit. It is defined by different people from different aspect. According to RM Lynch and Robert Williamson "usually profits does not just happen, profits are managed. Before we can make intelligent approaches to the management concept of profit, there are after all, several different interpretations of the term. Profit, an economist says that profit is the reward of entrepreneurship for risk taking. A labour leader might say that it is a measure of how efficiently labour has produced and that it provides a base for negotiating a wage increase. An investor views it as a gauge for return on his/her investment. An internal revenue agent might regard, it is the base for determining income taxes. The accountant will define it simply as the excess of firm's revenue over the expenses of producing revenue in a given period. "Management thinks of profit as a tangible expression of the goals it has set for the firm, a measure of the performance towards the achievement of it, as a means of measuring the health, growth and continuity of the economy" (Lynch and Williamson, 1989:249).

2.5 Limitation of Profit Planning and Control

Profit planning and control is an important tool for management. However, each tool suffers some limitation and its use is fruitful within these limits. PPC is also not a limitless tool, so it is essential that the use of PPC must be having a full knowledge of its limitations.

The limitations of profit planning and control are as follows:

- i. It is difficult, it is not impossible to estimate revenues and expenses in our company realistically.
- ii. Our management has no interest in all the estimates and schedules. Our strictly informal system is better and works well.
- iii. It is not realistic to write out and distribute our goals, policies, and guidelines to all the supervisors.
- iv. Budgeting places too great a demand on management time, especially to revise budgets constantly. Too much paper work is required.
- v. It takes away management flexibility.
- vi. It creates all kinds of behavioral problems and adds a level of complexity.
- vii. It is too costly, to the side from management time.
- viii. The managers, supervisors and other employees hate budgets.

2.6 Application of PPC to Various Organizations

Some people say that comprehensive profit planning and control is applicable only to large and complex organization. But it is impossible to forecast our revenues and expenses without profit planning and control for any organization because comprehensive budgeting is a fine idea. These views are common regarding non manufacturing enterprises-service companies, financial institutions, hospital, 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 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 may be a need for 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 enterprises cannot be designed. A profit planning and control system must be tailored to fit the particular enterprises, and it must be continually adopted as the enterprise and its environmental change. (Welsch, Hilton & Gordon, 2006:59)

2.7 Sales Budgeting or Plan

Sales budget is one of the operating budgets. It is a starting point in the budgeting procedure. It is a forecast of total sales of all the product or services expressed in term of physical quantities and values in respect of each product of a future budget period. The process of preparing and using sales budget to achieve sales objectives is called sales budgeting. In other sense, the entire process of preparing sales budget is known as sales budgeting. Sales budget deals with sales volume, sales revenue and sales expenses. It covers sales forecast, marketing plan, sales expenses or promotion expenses plan. All budgets are affected by sales budget and all budgets are affected by sales budget and all budgets expect sales budget are related with cost. Therefore sales budget is the foundation of all other budgets.

The primary purposes of sales plan are as follows:

- i. To reduce uncertainty about future revenues
- ii. To incorporate management judgments and decisions into the planning process (i.e. in the marketing plans)
- iii. To provide necessary information for developing other elements of a comprehensive profit plan, and
- iv. To facilitate management's control of sales activities.

(Welsch, Hilton and Gordon, 2006:172)

Developing a Comprehensive Sales Plan

For the development of comprehensive sales plan, Welsch, Hilton and Gordon suggested these steps for developing a comprehensive sales plan:

Step 1: Develop management guidelines specific to sales planning including the sales planning process and planning responsibilities.

Step 2: Prepare one (or more) sales (market) forecasts consistent with specified forecasting guidelines including assumption.

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

Step 4: Base on above steps applies management evaluation and judgment to develop a comprehensive sales plan.

Step 5: Secure managerial commitment to attain the goals specified in the comprehensive sales plan.

2.8 Production Budget or Plan

Production budget is the initial step in budgeting of manufacturing operations. The production budget is an estimation of planned quantity of goods to be manufactured during budget period. Production budget is based on estimated sales volume and desired inventory level. Production must be planned to allow sufficient time to manufacture the products before the estimated data of sales. It is prepared in the basis of sales budget, plan capacity, opening inventory of finished goods, required closing stock of finished goods and policy of management.

A complete production plan should show budget data classified by (a) products to be manufactured, (b) interim time periods and (c) activities of each responsibility center in the manufacturing process. In addition to the production budget, three other principle budgets are relevant to manufacturing:

- a) The direct material and purchased components budget, which specifies the planned material and components requirements.
- b) The labor budget, which shows the planned quantity and cost of direct labor, and

c) The manufacturing expenses or factory overhead budget, which includes the plans for all factory costs other than direct material and direct labor.

Developing the Production Plan

Production managers must translate sales budget into unit production requirement for the budget period for each product while considering the management's inventory policies. Basically there are three major steps to be followed while developing a production plan:

1. Formulate policies relative to inventory levels, and /or production levels
2. Determine the total quantity of each product that is to be manufactured during the budget period
3. Schedule this production by interim periods.

2.9 Review of the Previous Thesis

There was not seen any research papers concerning the particular topic i.e. "Impact of sales and production budgeting on profitability of Bottlers Nepal Ltd." which focus the effect of sales and production budgeting on profitability. Sales and production budgeting is very important tools for profit planning to any business organization. Without sales and production budget other plans of profit planning and control can not be prepared. Some of the previous related researcher's major objectives and finding are as follows:

Mr. Narayan Pradsad Acharya (2010) has conducted research work topic of Cost volume profit analysis as a tool of profit planning with reference to Salt Trading Corporation for partial fulfillment of MBS, submitted to he central department of Management TU. A study has covers five years of period of 2060/61 to 2064/65.

The objectives are:

- ✓ To study and analyze the Cost Volume Profit analysis of salt Trading Corporation.
- ✓ To examine interrelationship between CVP analysis and profit planning.
- ✓ To evaluate cost volume profit trend with problems of salt trading corporation.
- ✓ To analyze the impact Cost Volume Profit of the corporation's Productivity
- ✓ To provide suitable suggestion to the corporation based on the findings.

Majors' findings are:

- ✓ The corporation has not maintained the broad and long range objectives periodic report and objectives are limited to the high ranking.
- ✓ There is the lack of coordination between top and lower level of management.
- ✓ The financial position of the industry is not satisfactory. Gross profit margin ratio and net profit margin ration are not satisfactory.
- ✓ There is no any effective plan for cost control programmed or techniques.

Mr. Sanu Babu Barakoti (2009) has submitted the thesis on the topic "Cost Volume Profit analysis of Bottlers Nepal Limited". Mr Barakoti has concerned his study to determine cost, volume and profit and profitability of Bottlers Nepal Limited (Terai). He has made the researches covering the time period of five year from fiscal year 2002/03 to 2006/07

The objectives are:

- ✓ To analyze different component of cost as per cost behavior.
- ✓ To study the presence application of Cost Volume Profit analysis in Bottlers Nepal Limited.
- ✓ To analyze the CVP and its impact in profitably of Bottlers Nepal Limited.

Major finding are:

- ✓ The company has not maintained the board and long rang objective for the report period and objectives are limited to the high ranking only.
- ✓ Relevant internal and external make citable are not fully exposure.
- ✓ Sales and production are not achieving because there is not an effective forecasting system.

- ✓ Enterprise has no financial plan and they have only sale and production plan in term of required target.
- ✓ The company's production trend is in increasing term.

Mr. Damodar Niraula (2008) has made research on "Impact of budgeting in Profitability of Nepalese public enterprises (A case study of Nepal Electricity Authority)" submitted to faculty of management, Shanker Dev Campus. In this study Mr. Damodar Niraula has pointed out following specific objectives, core finding.

Main objectives

- ✓ To analyze the various functional budget of NEA
- ✓ To analyze the true picture of managerial budgeting adopted by NEA.
- ✓ To analyze the variance between budgeted and actual achievements of the authority.
- ✓ To point out the major shortcomings and recommend suggestive measures.

Major finding

- ✓ Actual and budgeted sales are found to be significant but the difference between budgeted and actual production is found to vague. In spite of the fact, there is perfect correlation between budgeted and actual sales and production respectively.
- ✓ NEA is bearing a high fixed cost due to the technology that it is using till now, overstaffing and many more.
- ✓ Actual sales are always less than actual production due to power loss.
- ✓ It has not classified its overhead systematically, which creates difficulties in analyzing the expenses properly.
- ✓ NEA has no sufficient cash surplus to pay for expenditure, it was to borrow loan to meet minimum cash balance and we can say that it is the result of poor cash plan. And for that, it is paying a huge amount of interest in every year and the trend is of adding on it rather than of paying back.

Mr. Bhesh Raj Bhusal (2007) has conducted a research entitled "Use of Cost-Volume-Profit analysis to plan the profit in Nepalese manufacturing. A case study of Bottlers Nepal Limited." Mr. Bhusal had concerned his study to examine the

companies in Nepal. The study covered a five year period from fiscal year 1999/00 to 2003/04

The objectives are

- ✓ To study the present application of CVP analysis in BNL.
- ✓ To study the profitability and financial position of BNL.
- ✓ To analyze the CVP and its impacts in profitability of BNL.

The major finding was as follows

- ✓ BNL has only sales and production plan.
- ✓ Due to no effective sales forecasting techniques, sales target were not achieving.
- ✓ The profit trend of the company was not satisfactory. As compared to profit proportion was very low with fluctuated trend.
- ✓ BNL has not proper practice of segregating the mixed cost into fixed and variable portion.
- ✓ Decision making powers were centralized.

Mr. Chaturbhuja Aryal (2006) has conducted a research entitled "CVP analysis as a tool to measure effectiveness of PPC" (A case study of Herbs Production and Processing Co.Ltd.). He used primary and secondary data collected and used seven years data from the fiscal year 2054/55 to 2060/61 for analysis.

The objectives are

- ✓ To analyze the budget and cost control mechanism for the company.
- ✓ To analyze the cost and profit trend of the company in the light of Budget.
- ✓ To analyze the cost- volume-profit analysis for the company
- ✓ To provide suggestions for improving the budgeting problems.

The major finding was as follows

- ✓ Budgets were prepared on traditional method.
- ✓ HPPCL has high burden of management and administration expenses and interest only and which is directly influencing the profitability.
- ✓ There was not practice of separating cost into fixed and variable. The cost were roughly classified and that classification to use financial tools, like as flexible

budget, CVP , cost of goods sold and degree of operating leverage and profit margin ratio.

- ✓ HPPCL is suffering from huge losses. So in every year has negative net profit margin ratio.
- ✓ Profit volume ratio of the company is in fluctuated trend, which affects on BEP to the company.
- ✓ BEP of the company is always higher than Actual sales. So He Company should not maintain its expanses.

Mr. Madav Rijal (2005) has conducted a research on "cost volume profit analysis tools to measure effectiveness of profit planning and control: A case study of NEBICO private limited." He has centered his study to examine CVP analysis as a tool in manufacturing industry and to analyze the CVP and its impact in profit planning. For the practical fulfillment of MBS submitted to Shanker Dev Campus, Tribhuvan University, Rijal has analyzed the five years financial statement and has pointed out various objectives and findings:

The objectives are

- ✓ To analyze the cost volume profit for the company.
- ✓ To compare between production and sales plan.
- ✓ To examine the variation between production plan and actual production.

The major findings are

- ✓ The company's variable cost is in proportion than fixed cost in total cost amount, which contribute for lower contribution Margin.
- ✓ The company has high fixed cost (i.e. salary and wages, technical and computer fees, depreciation interest, provident fund and subsidies)
- ✓ Company has no any plan to reduce cost. There is lack of effective cost control programs or techniques.
- ✓ The profit trend of the company is not satisfactory. As compared to profit, proportion is very low with fluctuated trend.
- ✓ The company has no detailed of any systematic expenses plan. The fixed cost, variable cost, mixed expenses plan are the necessary elements for profit planning and control.

- ✓ The company has no effective inventory policy. The inventory management, raw material handling and controlling system are not efficient and effective.
- ✓ The board of directors is the main authority in price fixing and it directly interferes to price of biscuit and confectionary products.
- ✓ Nebico Pvt. Ltd has not proper practice of segregating the costs into fixed and variable or controllable and non controllable.
- ✓ There is no proper co-ordination among production, administration, distribution, inventory and sales department.
- ✓ Nebico has not utilized its capacity.

Mr. Dipendra Raj Dhakal (2005) has conducted research work on "Cost volume profit analysis as a tools to measure the effectiveness of profit planning and control: A Case Study of Gorkhakhali Rubber industry Limited" in the partial fulfillment for MBS, submitted to Shanker Dev Campus, T.U. Dhakal has covered five years period for FY 2050/57 to 2060/61 and listed some objectives and finding.

The objectives are

- ✓ To analyze the cost volume profit for the company.
- ✓ To measure the effectiveness of profit planning and control tools.
- ✓ To examine the variation between production plan and actual production.

Major Findings are

- ✓ Sales plan of GRIL is not properly maintained. The industry uses the various methods for sales planning like market survey, distribution network etc. but up to date record are not maintained. So they have poor budgeting system.
- ✓ GRIL is not practicing the scientific and appropriate cost classification technique costs are classified into fixed and variable as per the decision of the management. Out of the total cost of GRIL, variable cost is almost 60% in every year which cause the low contribution margin.
- ✓ GRIL is in high interest bracket, out of the total fixed costs almost 60% is to be paid for interest. And the profitability of the company is greatly influenced by high fixed cost.
- ✓ This industry does not have any detailed and systematic practice of planning of cost which is one of the essential elements of profit planning and control.
- ✓ Lack of coordination between top and lower level of management.
- ✓ GRIL is facing problem fluctuating international price of rubber. Sometimes it also faces the problem of raw material scarcity as well.
- ✓ Out of the two main product truck tyres, the truck tyres are more profitable than non truck tyres as shown by the product contribution margin.
- ✓ The financial position of the industry is not satisfactory. Gross profit margin ratio and net profit margin ratio are not satisfactory.

Mr. Tenzin Namdak (2005) has submitted the thesis on the topic "Cost Volume Profit analysis of Dairy Development Corporation." Mr. Namdak had concerned his study to determine the relationship between cost volume and profit and profitability of the DDC. His research covered the time period of five years from fiscal year 2055/56 to 2059/60.

The objectives are:

- ✓ To study and analyze the Cost Volume Profit analysis of Dairy Development Corporation.
- ✓ To examine relationship between Cost Volume Profit of DDC.
- ✓ To analyze the impact Cost Volume Profit of the corporation's Productivity
- ✓ To provide suitable suggestion to the corporation based on the findings.

The major findings were as follows

- ✓ DDC has been planning only on short-term basis.
- ✓ The practice of CVP analysis has not been use yet.
- ✓ There is no practice of segregating cost into fixed ad variables.
- ✓ Over- Utilization of capacity resulting in increasing operation and maintenance cost every year.
- ✓ The profitability of DDC is very low.

Mr. Rabin Dahal (2005) has submitted a research on "Profit planning system and financial condition of Nepal electricity authority". He has covered five years period from 2054/55 to 2058/59.

The objectives are

- ✓ To analyze the profit planning tools for the company.
- ✓ To analyze the cost-volume- profit for the company.
- ✓ To segregate the costs of company into fixed and variable costs and unit variable cost.

Major Findings are

- ✓ NEA has a practice of preparing both systemic (long range) and (tactical short range) profit plan.
- ✓ Overheads are not classified systematically and it creates problem to analyze is expenses properly.
- ✓ NEA is playing a huge amount of interest every year and it is suffering from high fixed costs.
- ✓ CVP analysis of the authority has the satisfactory position and also flexible budget analysis, the authority is able to earn operating profit of its utilized capacity.
- ✓ The authority does not maintain its periodic performance report systematically.
- ✓ The company had not practice of classification of costs into fixed costs and variable cost.
- ✓ The total fixed costs of the company were increasing annually.

- ✓ Advertisement, salary and allowance, communication expenses, insurance premium, depreciation and interest on long term loan were higher portion of total fixed cost and the amount of these items were highly incremental condition.
- ✓ The variable costs were also at increasing trends, and vital items were material with direct expenses on purchase, royalty, sales promotion expenses, transportation and insurance expenses, salary and wages, leakage and breakage, complementary expenses, traveling expenses and water.

2.10 Research Gap

All the research studies mentioned above are concerned with the study of profit planning system basically related to the planning of Nepalese companies. Most of the researches, profit planning tools are analyzed in own way. Especially comparative CVP analyses in public or private enterprises have not been done yet by other researcher and the finding and conclusion of all studies are generally same but impacts are rarely explained. The conclusions of those researches are that there are no proper planning and control system in Nepalese companies. Therefore this study is designated to highlight the “Impact of sales and production budgeting on profitability of manufacturing companies”. So this study is emphasizing the effect of sales and production budgeting on profitability of Bottlers Nepal Ltd. Therefore this study may be different from the common studies.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology employed in this study. Research methodology is the systematic method of finding solution to a problem i.e. systematic collection, recording, analysis, interpretation and reporting of information about various facts of a phenomenon under study. In this study research methodology describe the methods and processes applied in the entire aspect of the study. It includes wide range of methods including qualitative and quantitative technique for data analysis and presentation. Research methodology is simply the in-depth study or search of any particular topics, subject or area of investigation backed by the collection, compilation, presentation.

Research methodology refers to the various segmental steps to be adopted by a researcher in studying a problem with certain objectives in view. This process of investigation involves a series of well-thought-out activities of gathering, recording, analyzing and interpreting the data with the purpose if finding answers to the problem. This chapter contains the research design, population and sample size, sample selection procedure, data collection procedure, data processing, use of tools and techniques etc.

3.2 Research Design

The research design is the conceptual structure within which research is conducted. Research design is a plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variances. It is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. The research design refers to the entire process of planning and carrying out a research study. It constitutes the blueprint for the collection, measurement and analysis of data. As such the design includes an outline of what the researcher will do from writing the hypothesis and its operational implications to the final analysis of data.

This study is an examination and evaluation of budget process in profit planning program Bottlers Nepal Limited. Various functional budgets and other related accounting information and statement of the company are used to analyze the profit planning. Descriptive as well as analytical approaches have been adopted in this research. Various descriptive, analytical and exploratory research designs have been used to this research study.

3.3 Population and Sample

As this research aims at studying the profit planning aspect of the manufacturing companies taking the reference of Bottlers Nepal Limited and data have been analyze for several years of its operation. Due to various circumstances it could no be possible to attempt all the number of research population in this research. So, researcher has taken Bottlers Nepal Limited. been selected as sample for the present study.

3.4 Nature and Sources of Data

This study is mostly based on secondary data. However, primary data and information have been obtained through informal discussions with the staffs of the bank. Secondary data have been collected from the annual published accounting and financial statement. Similarly other necessary data have collected from website, newspapers and related publications. The output of the research work depends upon accuracy of the applied data. So, the researcher tried to collect up to data and accurate data as far as possible.

3.5 Tools of Data Analysis

Analysis is the careful study of available facts so that one can understand and drew conclusion from them on the basis of established principles and sound logic. This study mostly based the analysis of secondary data with the help of different statistical tools. Therefore the data have been collected accordingly and managed, analyzed and presented in suitable tables, formats, diagrams, graphs and charts. Such presentations have been interpreted and explained wherever necessary. For this purpose following techniques were used to explain the collected data.

1. Arithmetic Mean (\bar{X})

The central values that represent the characteristics of the whole distribution or the values around which all items of the distribution tend to concentrate are called Arithmetic mean. It is one of the important statistical measures of average. The arithmetic mean of a given set of observation is their sum divided by the number of observations.

$$\text{Arithmetic Mean } (\bar{X}) = \frac{\sum X}{N}$$

2. Standard Deviation (\dagger_x)

The standard deviation is the absolute measure of dispersion. It is defined as the positive square root of the mean of the square of the deviation taken from the arithmetic mean. The greater the amount of dispersion or variability, the greater the standard deviation, the greater will be the magnitude of the deviation of the values from their mean. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series and a large standard deviation means just the opposite.

$$\text{Standard Deviation } (\dagger_x) = \sqrt{\frac{\sum (X - \bar{X})^2}{N - 1}}$$

3. Coefficient of Variation (CV_x)

The relative measure of dispersion based on the standard deviation is known as the coefficient of variation. It is independent of unit. So, two distributions can be compared with the help of C.V. for their variability. Less the C.V., more will be the uniformity, consistency, stable and homogeneous etc. and vice versa.

$$\text{Coefficient of Variation } (CV_x) = \frac{\dagger_x}{\bar{X}} \times 100$$

4. Correlation Analysis (r_{xy})

Correlation analysis is the statistical tools use to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the direction of relationship between the two sets of figures. It is the square root of the coefficient of determination. Correlation can either be negative or positive. It always

lies between +1 to -1. The degree of association between the two variables, say X and Y, and is defined by correlation coefficient

$$\text{Correlation Analysis } (r_{xy}) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2} \sqrt{\sum (Y - \bar{Y})^2}}$$

5. Regression Analysis

Regression is the statistical tool which is used to determine the statistical relationships between two (or more) variables and to make estimation (or prediction) of one variable on the basis of the other variable(s). In other words, regression is that statistical tool with the help of which the unknown value of one variable can be estimated on the basis of known value of the other variable. The Regression equation is as

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

6. Diagrams and Graphs

Diagrams and graphs are visual aids which give a bird's eye view of a set of numerical data which show the information in a way that enables us to make comparison between two or more than two sets of data. Diagrams are in different types. Out of these various types of diagram one of the most important form of diagrammatic presentation of data is multiple bar diagram which is used in cases where multiple characteristics of the same set of data have to be presented and compared.

CHAPTER – IV

PRESENTATION AND ANALYSIS OF DATA

The main purpose of this study is to analyze the budgeted sales and production, actual sales and production and their impact on profitability of Bottlers Nepal Ltd. To accomplish these objectives, this chapter will analyze the various aspects of sales and production budget and their achievement and their impact on profitability of the company.

Generally two types of profit plan are formulated to achieve the organizational objectives. One is long range (strategic) profit plan and the other is short-range (tactical) profit plan. Profit planning and control is an overall plan of operations, providing guidelines to management and acting as signal light for the management. It uses in planning, organizing and controlling, all the financial and operating activities of the firm in the forth coming period or for a specified future period of time. PPC consists of three main budgets are as follows:

- i. Operational Budget: Budget related with revenue and expenses, such as sale budget, production budget, purchase budget, etc.
- ii. Financial Budget: Budget related with financial statements, such as balance sheet, income statement, etc.
- iii. Appropriation Budget: Budget related with advertising and publicity expenditure, research etc.

4.1 Sales Plan of BNL

It is fundamental plan of overall profit planning. It provides basic management decision about marketing. It is an organized approach for developing comprehensive sales plan. Different important decisions such as production, purchase, expenses etc. are made on the basis of sales budget. Therefore sales budget is the corner stone of the other budgets and a prime tool for profit planning in every company. If sales budget is wrongly prepared all other budgets will be wrong. So sales budget needs the broad knowledge of various aspects related with that budget. Bottlers Nepal Ltd has long experience of preparing budgets since its establishment.

4.1.1 Budgeted and Actual Sales Achievement

A comprehensive sales plan includes two separate but related plans- the strategic and the tactical sales plans. Strategic sales plan is generally for more than one year detailing by annual sales and tactical sales plan is used to plan sales for 12 months by quarter and by months for the first quarter. Bottlers Nepal Ltd. has a practice of preparing both strategic and tactical sales plan. Strategic sales plan is limited only in top level management and this study only focuses tactical sales plan of the company. Sales budget is prepared by BNL on the basis of the nature of demand and consumers.

The following table shows the budgeted sales and actual sales of Bottlers Nepal Ltd. for the five fiscal years from 2004/05 to 2008/09.

Table No. 4.1.1
Budgeted and Actual Sales Achievement

(Rs. in Million)

Fiscal Year	Budgeted Sales	Actual Sales	Achievement Ratio
2004/05	567.00	535.50	94.44%
2005/06	670.00	609.66	90.99%
2006/07	740.00	632.12	85.42%
2007/08	810.00	746.58	92.17%
2008/09	1120.00	1002.72	89.53%
Average	781.40	705.32	90.51%

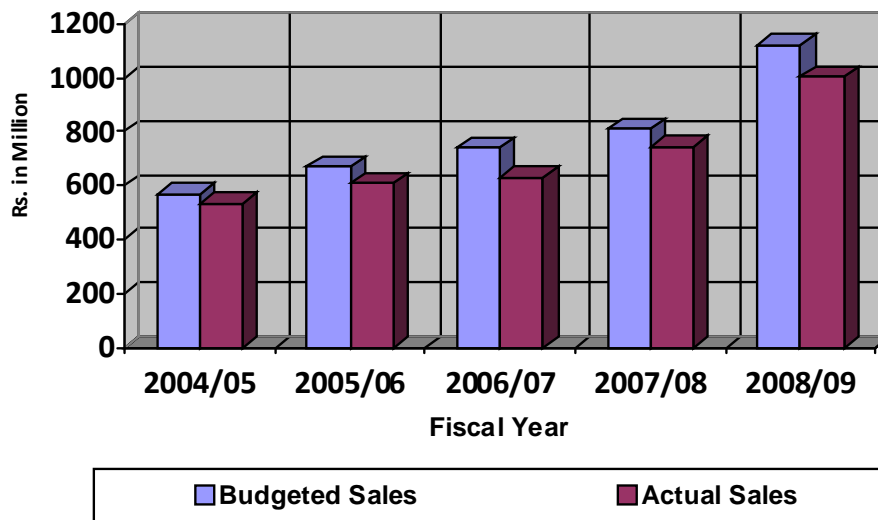
Source: Audit Report of BNL (2004/05 – 2008/09)

The above table shows that both sales, the budgeted sales and actual sales, were increasing trend from the beginning study period, fiscal year 2004/05 up to the fiscal year 2008/09. The company has achieve 94.44%, 90.99%, 85.42%, 92.17% and 89.53% of budgeted sales for the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. BNL is capable to actual sales of Rs. 535.50 Million out of the budgeted sales of Rs. 567 Million in the year 2004/05 study which is highest achievement of 94.44% over the study period. The average achievement is 90.51% for the total study period.

The budgeted sales and actual sales can be presented in the following figure chart. It is concluded that actual sales revenue is lower than the budgeted or targeted sales revenue during the study period.

Figure No. 4.1.1
Budgeted and Actual Sales Achievement

(Rs. in Million)



The above chart shows the budgeted sales and actual sales clearly for the study period. The budgeted sale and actual sale were increasing year by year from the beginning study period, fiscal year 2004/05 up to the fiscal year 2008/09. It is stated that greater amount of sales is made for the fiscal year 2008/09 to fulfill the demand from the customers.

4.1.2 Sales Trend Line by Regression Analysis

Another statistical tool is regression analysis, which determines the nature of relationship among budgeted and actual sales and makes the estimate from that on that base. It can help to estimate or forecast the future sales. For this purpose, actual sales figures is to be known as dependent variable and denoted by (Y), like wise budgeted sale is to be known as independent variable, which is denoted by (X). The regression line of actual sales on budgeted sales (Y on X) is as below: -

$$Y - \bar{Y} = x_{xy} \frac{\dagger_y}{\dagger_x} (X - \bar{X})$$

$$Y = 28.8911 + 0.8657 * X$$

Table No. 4.1.2
Sales Trend Line by Regression Analysis

(Rs. in Million)

Fiscal Year	Budgeted Sales (X)	Actual Sales (Y)	Trend Value (Yc)
2004/05	567.00	535.50	519.74
2005/06	670.00	609.66	608.91
2006/07	740.00	632.12	669.51
2007/08	810.00	746.58	730.11
2008/09	1120.00	1002.72	998.48

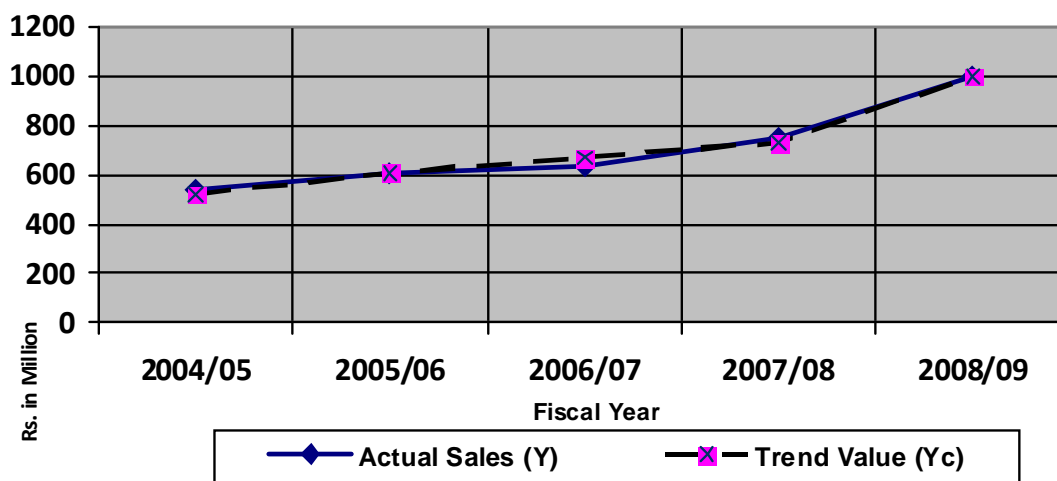
Source: Appendix 1

This regression equation, $Y = 28.8911 + 0.8657 * X$ shows that actual sale is increasing trend but the increment in actual sales is less than that of budgeted sales. And 0.8657 represent the change in value of dependent variable (Y), when the value of independent variable (X) changes by one unit or per rupee sales.

The following figure shows the relationship between the actual sales and trend sales value.

Figure No 4.1.2
Sales Trend Line by Regression Analysis

(Rs. in Million)



According to the chart, the trend line of the sales is increasing year to year. The company is efficient to make the actual sales for the fiscal year 2004/05, 2005/06, 2007/08 and 2008/09 because it has higher sales value than that given by the trend value of sales but the BNL is inefficient in 2006/07 due to the actual sales line is lower than trend line.

4.1.3 Comparative Analysis between Budgeted and Actual Sales

In order to compare the nature of variability of budgeted and actual sales of different years, it is needed to calculate the arithmetic mean, standard deviation and coefficient of variation of budgeted and actual figures of BNL for recent five years from FY 2004/051 to 2008/09. The detail calculation of these statistical tools are presented appendix 1. The summarized of results from appendix 1 are as follows:

Table No 4.1.3
Comparative Analysis between Budgeted and Actual Sales
(Rs. in Million)

Statistical tools	Budgeted Sales (X)	Actual Sales (Y)	Change
Mean (X)	781.40	705.32	-9.74%
Standard Deviation (SD)	209.50	182.69	-12.80%
Coefficient of Variation (CV)	26.81%	25.90%	-3.39%
Coefficient of Correlation (r)	0.9927		
Probable Error (PE)	0.0044		
Regression Equation (yc)	Y=28.8911+0.8657*X		

Source: Appendix 1

The above table 4.1.3 shows the comparison between budgeted sales and actual sales of the available data of the fiscal year 2004/05 to 2008/09. The results show that the mean of budgeted sales is Rs. 781.40 million where as actual sales mean is Rs. 705.32 million over the five years. The standard deviations of budgeted and actual sales are Rs. 209.50 million and Rs. 182.69 million respectively. From the result, sales achievements were less fluctuated than the budgeted sales being the lower CV (25.90%) of actual sales than that of the budgeted sales (26.81%).

On the other hand, the value of correlation coefficient is 0.9927 that explains that there is almost perfectly positive correlation between the budgeted and actual sales. The value of probable error is 0.0044 that explains that the value of correlation coefficient is significant, since correlation coefficient is greater than 6 times of probable error.

4.2 Production Plan of BNL

Production planning is the second step of profit planning and control in a manufacturing company. The past sales data and production data are the basic

foundations of production budget. It is affected by the planned ending inventory of finished goods. The production plan of BNL is based upon various controllable factors. It adopts seasonal production. The manager of the company prepares production plan with the help of factory supervisors, marketing managers and other members. The industry has sufficient capacity to produce the goods to fulfill the demand of budgeted sales. To find the budgeted production the following equation should be considered by the management.

Budgeted production,

$$= \text{Budgeted Sales} + \text{Budgeted Ending Inventory} - \text{Beginning Inventory}$$

4.2.1 Budgeted and Actual Production Achievement

Future plan be prepared based upon historical trend for production. So past trend of production is so important. Therefore, the following table shows the detailed budgeted production and actual production and achievement in percentage of BNL from 2004/05 to 2008/09.

Table No 4.2.1
Budgeted and Actual Production Achievement

(Rs. in Million)

Fiscal Year	Budgeted Production (X)	Actual Production (Y)	Achievement Ratio
2004/05	320.00	308.34	96.36%
2005/06	405.00	376.17	92.88%
2006/07	425.00	371.35	87.38%
2007/08	465.00	393.42	84.61%
2008/09	530.00	472.13	89.08%
Average	429.00	384.28	90.06%

Source: Audit Report of BNL (2004/05 – 2008/09)

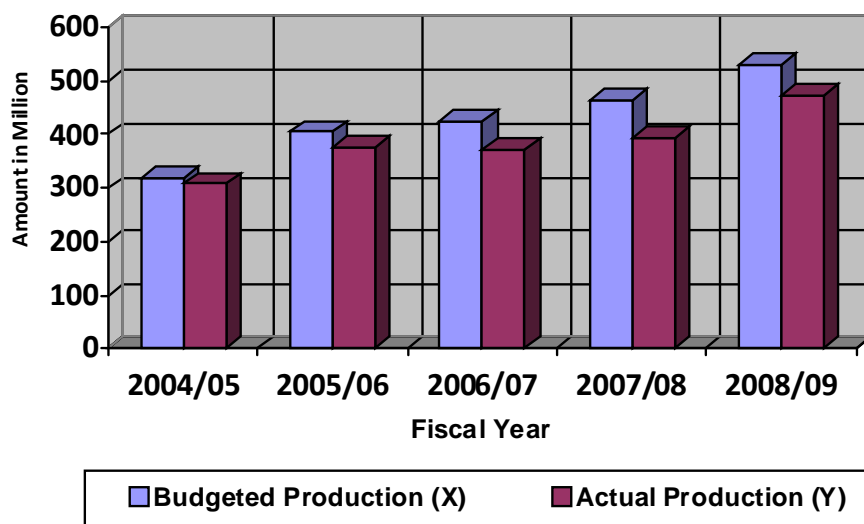
The above table 4.2.1 shows the budgeted and actual production of Bottlers Nepal Limited in million. According to the data, the budgeted production is in increasing trends from Rs. 320 million to Rs 530 million for five years but the actual production is flexible trends form the fiscal year 2004/05 to 2008/09. The company has got 96.36%, 92.88%, 87.38%, 84.61% and 89.08% of budgeted production for the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The company is efficient to produce for Rs. 308.34 million out of the budgeted of Rs. 320 million in

the year 2004/05 study which is highest achievement of 96.36% over the study period. The average achievement is 90.06% for the five years of study period.

The budgeted production and actual production can be presented in the following chart. It is accomplished that actual production is lower than the budgeted or targeted production during the study period.

Figure No 4.2.1
Budgeted and Actual Production Achievement

(Rs. in Million)



The

above bar diagram 4.2.1 shows the budgeted production and actual production for the recent five years. The chart reflects the budgeted production and actual production of the BNL year by year clearly. It is noticed that both production were in increasing trend.

4.2.2 Production Trend Line by Regression Analysis

an extra statistical tool is regression analysis, which determines the nature of relationship among budgeted and actual production and makes the estimate from that on that base. It can help to estimate or forecast the future production. For this purpose, actual production figures is to be known as dependent variable and denoted by (Y), like wise budgeted production is to be known as independent variable, which is denoted by (X). The regression line of actual production on budgeted production (Y on X) is as below:

$$Y - \bar{Y} = x_{xy} \frac{\dagger_y}{\dagger_x} (X - \bar{X})$$

$$Y = 67.0162 + 0.7395 * X$$

Table No 4.2.2
Production Trend Line by Regression Analysis

(Rs. in Million)

Fiscal Year	Budgeted Production (X)	Actual Production (Y)	Trend Value (Yc)
2004/05	320.00	308.34	303.66
2005/06	405.00	376.17	366.51
2006/07	425.00	371.35	381.30
2007/08	465.00	393.42	410.88
2008/09	530.00	472.13	458.95

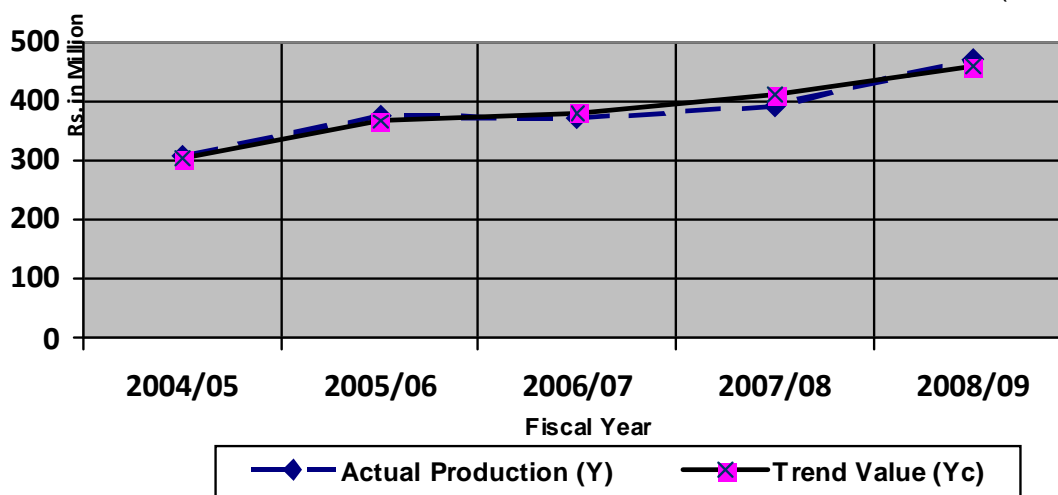
Source: Appendix 2

This regression equation, $Y = 67.0162 + 0.7395 * X$ shows that actual production is increasing trend but the increment in actual sales is less than that of budgeted production. And 0.7395 represent the change in value of dependent variable, actual production,(Y), when the value of independent variable, budgeted production, (X) changes per rupee of sales.

The following figure shows the relationship between the actual production and trend production value.

Figure No 4.2.2
Production Trend Line by Regression Analysis

(Rs. in Million)



Above line chart shows the trend line of the production with actual production in million. The chart shows that both lines are increasing year to year. But the company is failing to produce actual production in 2006/07 on the base of the trend line of production. Because the line chart shows the actual production line is lower to the trend line made by trend value for that year.

4.2.3 Comparative Analysis between Budgeted and Actual Production

In order to compare the nature of variability of budgeted and actual production of different years, it is needed to calculate the arithmetic mean (average), standard deviation, coefficient of variation and coefficient of correlation of budgeted and actual figures. The details of statistical calculation are made in appendix 2. The summarized of results from appendix 2 are as follows:

Table No 4.2.3
Comparative Analysis between Budgeted and Actual Production
(Rs. in Million)

Statistical tools	Budgeted Production (X)	Actual Production (Y)	Change
Mean (X)	429.00	384.28	-10.42%
Standard Deviation (SD)	77.41	58.74	-24.12%
Coefficient of Variation (CV)	18.04%	15.29%	-15.29%
Coefficient of Correlation (r)	0.9746		
Probable Error (PE)	0.0151		
Regression Equation (yc)	$Y=67.0162+0.7395 \cdot X$		

Source: Appendix 2

The above table 4.2.3 shows the comparison between budgeted production and actual production of the available data of the fiscal year 2004/05 to 2008/09. The outcome show that the average mean of budgeted production is Rs. 429 million where as actual production mean is Rs. 384.28 million over the five years. The standard deviations of budgeted and actual production are Rs. 77.41 million and Rs. 58.74 million respectively. From the result, production achievements were less fluctuated than the budgeted production because of lower (15.29%) coefficient of variation of actual production than that of the budgeted production (18.04%).

On the other hand, the value of correlation coefficient is +ve 0.9746 that explains that there is almost perfectly positive correlation between the budgeted and actual production. The value of probable error is 0.0151 that explains that the value of correlation coefficient is significant, since correlation coefficient is greater than 6 times of probable error.

4.3 Profit and Loss of BNL

The profit and loss account of the company can be referred as a final account which summarized the revenue incomes and expenses incurred during the financial year. Therefore, profit and loss account is prepared to ascertain the operating results of a company in terms of net profit or loss. The profit and loss account determines net income or loss by matching incomes and expenses occurred during a particular financial year.

4.3.1 Income Statement of BNL

Bottlers Nepal Limited is also preparing income statement at the end of every fiscal year. It shows the final conclusion of the operation of fiscal year.

The following table shows Income statement of Bottlers Nepal Ltd. for the fiscal year 2004/05 to 2008/09.

Table No 4.3.1
Income Statement of BNL

Particulars	(Rs. in Million)				
	2004/05	2005/06	2006/07	2007/08	2008/09
Sales revenue	535.49	609.65	632.11	746.58	1002.72
(-) Cost of sales	306.48	376.26	358.38	455.13	621.90
Gross Profit	229.01	233.39	273.74	291.45	380.82
Other incomes	1.61	1.26	0.09	1.32	3.07
distribution expenses	25.05	24.16	24.20	25.97	34.82
Administrative and general expenses	103.27	130.45	144.57	217.56	244.81
Operating profit	102.30	80.05	105.06	49.23	131.89
Interest expenses	0.08	0.28	0.00	20.79	26.19
Depreciation and amortization	44.11	56.28	63.37	66.44	70.44
(Profit)/loss on sales of fixed assets	0.00	0.00	0.64	10.07	-9.97

Dividend received from subsidiary company	-16.45	-10.99	-10.99	-83.48	-
Provision for staff quarter	3.33	1.22	2.57	1.77	1.76
Provision for bonus	5.72	2.98	4.45	3.36	3.05
Total expenditures	44.83	50.28	60.05	18.95	91.47
Profit before tax	57.48	29.78	45.01	30.27	30.46
Provision for tax	8.87	4.10	7.21	2.21	0.72
Tax paid in respects of earlier year	0.00	6.30	16.21	39.49	9.21
Profit after tax	48.61	19.37	21.60	-14.49	20.53
Balance brought forward	304.83	333.96	343.58	178.48	167.05
Profit for distribution	353.44	353.33	365.18		-
Purposed dividend	19.49	9.74	0.00		9.74
Balance carried forward	333.96	343.56	365.18	167.05	177.84

Source: Audit Report of BNL (2004/05 – 2008/09)

The above table 4.3.1 shows the income statement of Bottlers Nepal Ltd., In the middle of the statement, the operating profits are positive for all the period i.e Rs.102.30, 80.05, 105.06, 49.23 and 131.89 million for the 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. Similarly, the end of the statement, there is positive value of profit after tax for study period that tells the favorable economic condition of company except for 2007/08. It was seemed to Rs. 48.61 million profits after tax is made in fiscal year 2004/05.

4.3.2 Gross Profit, Operating Profit and Actual Profit

Every organization is established to make profit. Success of any organization is primarily measured by profit because the existence of all the resources employed in the company is possible only when there is profit. If a firm cannot make profit, it cannot generate capital for future. Profit is the excess or residual income left after cost of production or the payments of the expenses.

The following table shows gross profit, operating profit and actual profit of Bottlers Nepal Ltd. for the fiscal year 2004/05 to 2008/09.

Table No 4.3.2
Gross Profit, Operating Profit and Actual Profit

(Rs. in Million)

Fiscal Year	Gross Profit	Operating Profit	Actual Profit
2004/05	229.02	102.3	48.61
2005/06	233.39	80.06	19.37
2006/07	273.74	105.06	21.60
2007/08	291.447	49.228	30.23
2008/09	380.826	131.894	30.46

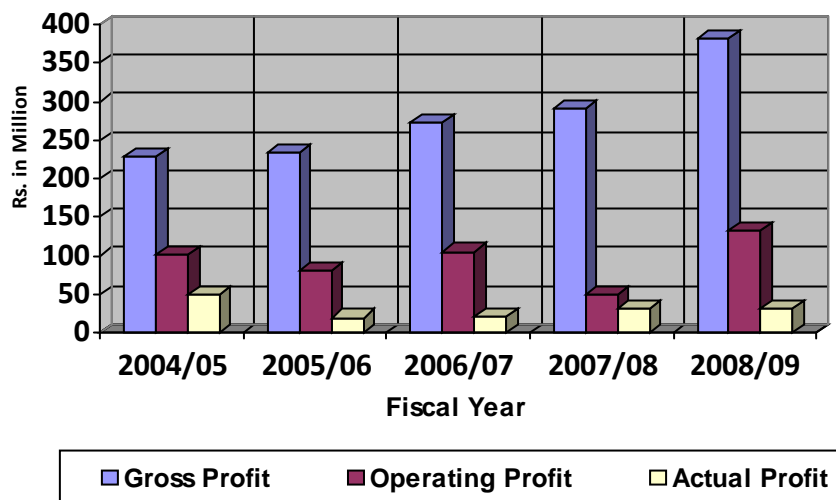
Source: Audit Report of BNL (2004/05 – 2008/09)

The above table 4.3.2 is the summary of the miscellaneous profit figures from the income statement over the study period. The gross profit of the Bottlers Nepal Ltd. were Rs. 229.02, 233.39, 273.74, 291.447 and 380.826 million for the for the 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. Operating profit is calculated after charging general expenses and administrative expenses. Finally, there were actual profit is calculated of Rs. 48.61, 19.37, 21.60, 30.23 and 30.46 million for 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. This shows the favorable economic condition of company.

The following bar diagram shows various profit of Bottlers Nepal Ltd. for the fiscal year 2004/05 to 2008/09.

Figure No 4.3.2
Gross Profit, Operating Profit and Actual Profit

(Rs. in Million)



4.3.3 Actual Profit Trend Line by Regression Analysis

In order to analyze the trend of net profit after tax (actual profit) and to estimate the possible future actual profit, we can use statistical tool, least square method. This shows the relationship between time or year and net profit of the relevant year. To fit the straight line trend, the time factor is considered as independent and actual profit is considered as dependent factor upon time. Then, the straight line trend of actual profit 'Y' upon time 'X' is expressed by:

$$Y_c = a + bX$$

Where,

Y= actual profit

X= time

a = intercept of y

b = slope of trend line or growth rate

The details of statistical calculation are made in appendix and the summarized of results from appendix 3 are as follows:

Table No 4.3.3
Actual Profit Trend Line by Regression Analysis

(Rs. in Million)

Fiscal Year	Actual Profit (Y)	Trend Value (Yc)
2004/05	48.61	35.13
2005/06	19.37	32.59
2006/07	21.60	30.05
2007/08	30.23	27.51
2008/09	30.46	24.97
Regression Equation Y= a + b*x		30.05 -2.54*X

Source: Appendix 3

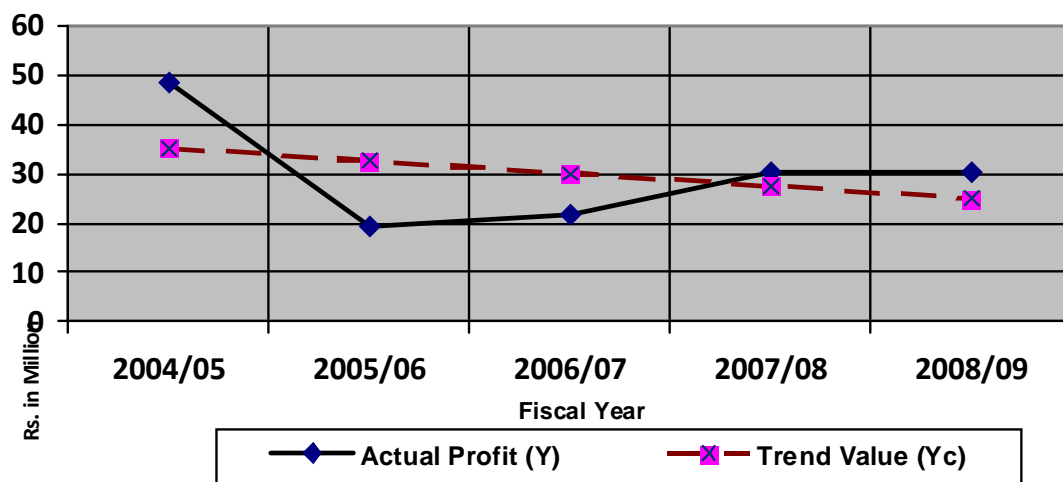
The table 4.3.3 gives the actual profit and trend value of profit of Bottlers Nepal Ltd. The actual values of the profits are greater than that of trend value of profit for the 2004/05, 2007/08 and 2008/09 by comparing to the time base. This shows the company is efficient to earn profit as passes of time and remain two year 2005/06 and 2006/07 is inefficient.

Regression Equation $30.05 - 2.54 * X$ is used for calculation of trend value, The trend line shows that the actual profit will be decreased by 2.54 million every year if the same trend of the past year continuous in the future. Otherwise it is not possible.

Actual profit and trend value of profit can be shown in following figures:

Figure No 4.3.3
Actual Profit Trend Line by Regression Analysis

(Rs. in Million)



The above figure shows the trend line made from actual profit and expected trend value of the Bottlers Nepal Ltd. the company is not capable to earn actual profit as the trend line made from the regression equation for 2005/06 and 2006/07 although the trend line is decreasing trend as passes of time, because the line chart shows clearly that the actual profit line is below to the trend line.

4.3.4 Relation between Actual Sales and Actual Profit

Profit is the excess of revenue over its costs. To increase the profit means to increase the revenue or reduce the cost by not cutting down the cost rather to increase the efficiency of costs. To earn maximum profit with optimum resource utilization is the main objective of any organization. An appropriate systematic and scientific planned sales and profit helps to predict the actual sales and profit. In spite of so, actually actual profit can be only obtained from actual sales. So profit is generally highly depends upon the sales.

The following table shows the sales and actual profit of Bottlers Nepal Ltd. for the five fiscal years from 2004/05 to 2008/09 and the summarized of results from appendix 4 are as follows:

Table No 4.3.4
Relation between Actual Sales and Actual Profit

(Rs. in Million)

Fiscal Year	Actual Sales (X)	Actual Profit (Y)
2004/05	535.50	48.61
2005/06	609.66	19.37
2006/07	632.12	21.6
2007/08	746.58	30.23
2008/09	1002.72	30.46
Total	3526.58	150.27
Mean	705.32	30.05
Standard Deviation	182.69	11.51
Coefficient of Variation	25.90%	38.31%
Coefficient Correlation	-0.1644	
Probable Error	0.2935	

Source: Appendix 4

The above table 4.3.4 shows relation between actual sales and actual profit from 2004/05 to 2008/09. The summary gives, that the relation of actual sales and profit is not satisfactory at all. Actual sales are increasing during the whole study period but actual profit was decreasing during period. The average sale and standard deviation of sales is Rs. 705.32 million and Rs. 182.69 million respectively whereas the average profit and standard deviation is Rs. 30.05 million and Rs. 11.51 million over the study period. The sales are less sensitivity than that of profit changes because the sales has lower CV (25.90%) than that of profit CV (38.31%). As a result, actual sales and actual profit is in opposite relation, it means the correlation coefficient between actual sales and actual profit of Bottlers Nepal Ltd. of the study period is $r_{xy} = -0.1644$ (-ve). Therefore, there is very less correlation coefficient between actual sales and actual profit.

The significant of correlation ' r_{xy} ' is tested by the help of probable error (PE) of ' r ' and $6 \times 0.2935 = 1.76$. Since coefficient of correlation ' r ' is less than $6 \times PE$ (i.e. $-0.1644 < 1.76$). Thus the calculated correlation coefficient between actual sales and

profit of the Bottlers Nepal Ltd. is very much unreliable or not significant at all. Therefore, BNL needs to effort very hard to make it reliable.

4.3.5 Relation between Actual Production and Actual Profit

Profit is the ultimate goal of every business enterprises. Profit is the difference of revenue and cost. Profit plan thus refer to the planning of revenue (i.e. increase the revenues) and planning of cost (i.e. increase the efficiency of cost). And production budget is and estimate of the quantity of goods to be manufactured during the budget period. An appropriate systematic and scientific planned production and profit helps to predict the actual production and profit and assists to avoid the forthcoming risks

The following table shows the production and actual profit of Bottlers Nepal Ltd. for the five fiscal years from 2004/05 to 2008/09 and the summarized of results from appendix 5 are as follows:

Table No 4.3.5
Relation between Actual Production and Actual Profit
(Rs. in Million)

Fiscal Year	Actual Production (X)	Actual Profit (Y)
2004/05	308.34	48.61
2005/06	376.17	19.37
2006/07	371.35	21.6
2007/08	393.42	30.23
2008/09	472.13	30.46
Total	1921.42	150.27
Mean	384.28	30.05
Standard Deviation	58.74	11.51
Coefficient of Variation	15.29%	38.31%
Coefficient Correlation	-0.4348	
Probable Error	0.2446	

Source: Appendix 5

The above table 4.3.5 shows relation between actual production and actual profit from 2004/05 to 2008/09. Actual production is increasing trend except 2006/07 but actual profit was first decrease then increase. The average production value is Rs. 384.28 million and standard deviation of production is Rs. 58.74 million where as the

average profit was 30.05 million and standard deviation 11.52 million. The production is less sensitivity than that of profit changes because the production has lower cv (15.29%) than that of profit cv (38.31%). As a result, actual production and actual profit is in opposite relation, it means the correlation coefficient between actual sales and actual profit of Bottlers Nepal Ltd. of the study period is $r_{xy} = -0.4348$ (-ve). Therefore, there is nearly 0.5 correlated between actual sales and actual profit.

The significant of correlation ' r_{xy} ' is tested by the help of probable error (PE) of ' r ' and $6 \times 0.2446 = 1.47$. Since coefficient of correlation ' r ' is less than $6 \times PE$ (i.e. $-0.4348 < 1.76$). Thus the calculated correlation coefficient between actual production and profit of the Bottlers Nepal Ltd. is very much unreliable.

4.4 Cost Volume Profit Analysis of BNL

Cost volume profit analysis is the process of examining the relationships among revenues cost and profits for a relevant range of an activity with in a particular time frame. It is one of the most important and powerful tools that manager have at their command in short term planning.

4.4.1 Segregation of Cost Behavior

Classification of costs into fixed and variable play an important role in management budgeting. While accounting to the cost behavior, cost can be broadly classified into two ways. First is fixed cost and second is variable cost. If any cost remains constant in total at any level of activity within the relevant range, it is called the fixed costs. On the other hand variable costs change in direct proportion and in the same direction as the change in activity level. Variable expenses are activity based because they are incurred as a direct result of production.

Those expenses that are neither fixed nor variable because they possess some characteristics of both fixed and variable are known as semi variable. The classification of costs in fixed and variable has been found as below

Table No 4.4.1
Segregation of Cost Behavior

Cost Heads	Cost Variability	Cost Heads	Cost Variability
Material cost	Variable	Depreciation and amortization	Fixed
Production costs	30% Fixed	Accommodation expenses	Fixed
Distribution expenses	30% Fixed	Staff bonus	Fixed
Trade discount	Variable	Audit fees	Fixed
Advertisement and publicity	50% Fixed	Legal expenses	50% Fixed
Sales promotion	70% Fixed	Rates, registration and taxes	Fixed
Subscription and donation	Variable	Bank charges	Fixed
Rejection and breakages	Variable	Annual general meeting expenses	Fixed
Product transfer fees	Variable	Insurance	Fixed
Salaries, wages and allowances	Fixed	Communication expenses	90% Fixed
Gratuity and contribution to provident fund	Fixed	Printing and stationary	70% Fixed
Security expenses	Fixed	Training and development	70% Fixed
Rent	Fixed	Uniform expenses	Variable
Repairs and maintenance	50% Fixed	Provision for doubtful debts and obsolete stock and fixed assets	Fixed
Power and fuel	20% Fixed	Royalties and management fees	Variable
Traveling and	Variable	Obsolete stock and	Fixed

conveyance		fixed assets written off	
Interest expenses	Fixed	Other expenses	50% Fixed

Source: Audit Report of BNL (2004/05 – 2008/09)

4.4.2 Cost Volume Profit Analysis

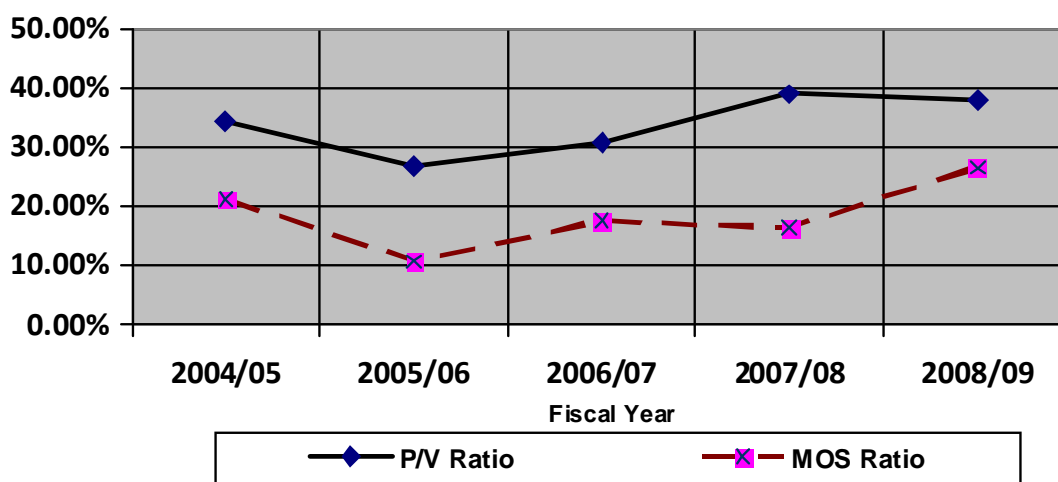
Cost volume profit analysis is the process of examining the relationships among revenues cost and profits for a relevant range of an activity with in a particulars time frame. It is one of the most important and powerful tools that manager have at their command in short term planning.

Table No 4.4.2
Cost Volume Profit Analysis

Fiscal Year	Sales Revenue	Variable cost	Contribution Margin	Total Fixed Cost
2004/05	535.50	350.49	185.01	145.60
2005/06	609.66	445.55	164.11	146.58
2006/07	632.12	436.72	195.40	160.83
2007/08	746.58	455.13	291.45	243.54
2008/09	1002.72	621.89	380.83	279.63

Source: Source: Appendix 7

Figure No 4.4.2
Cost Volume Profit Analysis



i. Profit Volume Analysis

Contribution Margin is the excess of sales revenue over variable costs, so contribution margin means how much is left from sales revenue after covering variable expenses that are contributed toward profit for the period. Percentage of contribution margin to total sales is referred to as the C/M ratio, popularly known as P/V ratio. Profit volume ratio (PV ratio) establishes a relationship between the contribution & sales value. The analysis of relationship between profit & volume is known as profit volume analysis.

It can be expressed as:

Contribution Margin = Sales - Variable Cost

$$\text{P/V Ratio} = \frac{\text{Contribution Margin}}{\text{Sale Revenue}}$$

From the calculation the Bottlers Nepal Ltd. has Rs. 185.01, 164.11, 195.40, 291.45 and 380.83 million for 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively similarly the PV ratio were 34.55%, 26.92%, 30.91%, 39.04% and 37.98% for the five study period.

ii. Break Even Point Analysis

Break even point is that quantity of sales at which the operation income is zero. Cost volume profit analysis is sometimes referred to simply as a break even analysis. Profit begins from the break even point. Profit planning of each firm begins from break even analysis. It is survival point where all firms must at least remain to sustain or continue the business. It can be expressed as:

$$\text{BEP Sales in Rs.} = \frac{\text{FC}}{\text{PV Ratio}}$$

From the calculation the Bottlers Nepal Ltd. required to sales of Rs. 421.43, 544.54, 520.29, 623.85 and 736.28 million for break even for 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively.

iii. Margin of Safety Analysis

Margin of safety is the difference between the budgeted or actual sales revenue. It is a position above the BEP. Manager often consider the size of the company's margin

of safety decisions about various business opportunities. The margin of safety can be expressed as units, value or a percentage.

MOS in Rs. = Actual sales -BEP sales

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

From the calculation the Bottlers Nepal Ltd. has a margin of safety of Rs. 114.07, 65.12, 111.83, 122.73 and 266.44 million for 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively which is 21.30%, 10.68%, 17.69%, 16.44% and 26.57% in term of percentage, called margin of safety ratio.

4.5.1 Profitability Ratio

Profitability ratios are useful to measure the efficiency of operation of a firm in term of profit. Profit is the indicator of the financial performance of any firm. Higher the profitability ratio shows the efficiency of the management. It includes gross profit margin ratio, operating ratio, net profit margin ratio, and return on shareholder's equity and return of total assets.

The following table shows the various profitability of Bottlers Nepal Ltd. for the five fiscal years from 2004/05 to 2008/09.

Table No 4.5.1
Profitability Ratio

Fiscal Year	GPM	OPR	NPM	ROE	ROA
2004/05	42.77%	19.10%	9.08%	6.98%	4.69%
2005/06	38.28%	13.13%	3.18%	2.75%	1.87%
2006/07	43.31%	16.62%	3.42%	2.97%	2.40%
2007/08	39.04%	6.59%	4.05%	5.71%	2.90%
2008/09	37.98%	13.15%	3.04%	5.64%	2.96%

Source: Appendix 8

From the table 4.5.1, Gross profit margin of the Bottlers Nepal Ltd. were 42.77%, 38.28%, 43.31%, 39.04% and 37.98% for 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. By studding the operating profit ratio, it is just satisfactory profit compare with sales of the company that has average of 13.72% over the five years.

But net profit margin will gradually decreasing year to year i.e. 9.08%, 3.18%, 3.42%, 4.05% and 3.04% for 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The company has higher NPM of 9.08% in 2004/05 and lower in 3.04% in 2008/09.

In the same way, return on shareholder's equity (ROE) are 6.98%, 2.75%, 2.97%, 5.71% and 5.64% for 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. Where as Return on total assets ratio is 4.69%, 1.87%, 2.40%, 2.90% and 2.96% for same years respectively which is nearly constantly earn comparing total assets.

Finally, higher profitability ratio including above mention ratio signifies higher profitability and better utilization of total resources whereas lower ratio indicates poor financial planning and low efficiency.

4.5.2 Liquidity Ratio

For liquidity analysis, current ratio and quick ratio has been used. Current ratio is calculated by dividing the current assets by current liabilities. The current ratio measures the extent to which the claims of short term creditors those assets which can be converted into cash within a year. On the other hand, current liabilities are those liabilities that are payable within one year.

The following table shows the current ratio and quick ratio for the five fiscal years from 2004/05 to 2008/09 and the details calculation are in appendix 9 :

Table No 4.5.2
Liquidity Ratio

Fiscal Year	Current Ratio	Quick Ratio
2004/05	1.49	0.43
2005/06	1.60	0.28
2006/07	2.57	0.79
2007/08	1.41	0.72
2008/09	1.07	0.59

Source: Appendix 9

From the above table, the current ratio of Bottlers Nepal Ltd. were 1.49, 1.60, 2.57, 1.41 and 1.07 times for the fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 respectively. The current ratios were in fluctuating trend ranging from 1.07

in 2008/09 up to 2.57 times in 2006/07. It is concluding that the company has maintained more current assets for 2006/07 comparing to current liability being the standard ratio is 2 times.

In comparison to the quick ratio, the company has lower the quick assets for all the year without meeting standard. Because BNL has lower quick ratio than the standard ratio than standard of 1 times. It shows that the company is inefficient for payment in short-term obligation over the last five years. As a result, they may get suffer from liquidity problem.

4.12. Major Findings

The major findings of this study based on the analysis of available secondary data are pointed out as follows:

- ✓ Bottlers Nepal Ltd. has a practice of preparing both strategic and tactical managerial budgeting but tactical short range plan is prepared for external purpose and strategic plan is prepared for internal purpose.
- ✓ There is high degree of correlation between budgeted and actual sales i.e. 0.9927 approximately.
- ✓ The coefficient of variation and standard deviation of actual sales are less than budgeted sales. It indicates that budgeted sales are more variable than actual sales.
- ✓ The Bottlers Nepal Ltd. sales achievement has neither touched nor crossed the target sales during the study period. The sales achievement during fiscal five year is increasing every year.
- ✓ The regression equation shows that there is positive relation between budgeted and actual sales. In the same way there is positive relation between budgeted and actual production.
- ✓ There is positive correlation between budgeted and actual production but budgeted production is more variable than actual production.
- ✓ The trend line of actual sales and production is increasing but on the other hand trend line of actual profit is decreasing.
- ✓ Bottlers Nepal Ltd. has not proper practice or segregating the costs into fixed and variable or controllable and non-controllable.
- ✓ There is lack of effective cost control programmes or techniques.

- ✓ The profit trend of the company is not satisfactory. As compared to profit, proportion is very low with fluctuated trend.
- ✓ The company has no detailed and systematic expenses plan. The fixed, variable and mixed expenses plan is the necessary elements for profit planning and control.
- ✓ There are no any proper criteria for performance evaluation for financial tools.
- ✓ Bottlers Nepal Ltd. has satisfactory profitability ratio based on different factors which means better utilization of total resources.
- ✓ The company has not maintained the standard ratio for the current ratio and quick ratio that reflect the inefficient for the payments of short-term obligation.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Profit planning and control is the important tool of business operation. It helps to achieve objectives and goals to the enterprise. Profit is the excess of revenue over its cost. To increase the profit means, to increase the revenue or reduce the cost. Profit is the essential part of every business organization. To maximize the profit with the use of optimum resources is the basic objectives of any enterprises. Profit planning and control is the only latest management technique, which can be used to achieve the targeted objectives and to run management efficiently. It is the systematic and continuous process to attain the objectives of the enterprises for certain period of time. Organization cannot achieve its objectives effectively, efficiently and economically in absence of profit planning. Profit plans can be divided into two categories. One is strategic or long term profit plan which covers the period 5 to 10 or more years. And another is tactical or short-term profit plan which covers the one fiscal year.

Profit planning and control consists of three main budgets i.e. Operational budget, financial budget, and Appropriation budget. Operational budget includes sales budget, production budget, purchase budget etc. Financial budget includes cash budget, capital expenditure budget budgeted balance sheet, budgeted income statement, etc. Appropriation budget related with advertising and publicity expenditure, research etc. Out of three main budgets, sales and production budgets are related with operational budget. Profit planning or budgeting techniques start with planning the sales and production budgeting, that is an estimation of the future sales and production volume. All budgets are affected by sales budget and all budgets expect sales budgets are related with cost. Therefore sales budget is the foundation of all other budgets. On the basis of sales budget, production budget or planning is made. And all their functional budgets are prepared on the basis of the production budget. There fore sales and production planning process is an essential part of profit planning and control in every company.

The present study has mainly focused on sales and production budgeting system, practice, trend and these affect on profitability in Bottlers Nepal Ltd. The study has tried to analyze the relationship between sales and profit, production and profit, sales and production and sales, production and profit. This study has also tried to analyze the cost volume profit analysis as well as different profitability and financial ratio. The study has been organized in five main chapters consisting of introduction, review of literature, research methodology, data presentation and analysis, and summary, conclusion and recommendation.

5.2 Conclusion

Conclusions those have derived from this study are enumerated as hereunder:

1. Bottlers Nepal Ltd. has a practice of preparing both strategic and tactical managerial budgeting but tactical short range plan is prepared for external purpose and strategic plan is prepared for internal purpose.
2. There is high degree of correlation between budgeted and actual sales i.e. 0.9927 approximately.
3. The coefficient of variation and standard deviation of actual sales are less than budgeted sales. It indicates that budgeted sales are more variable than actual sales.
4. The Bottlers Nepal Ltd. sales achievement has neither touched nor crossed the target sales during the study period. The sales achievement during fiscal five year is increasing every year.
5. The regression equation shows that there is positive relation between budgeted and actual sales. In the same way there is positive relation between budgeted and actual production.
6. There is positive correlation between budgeted and actual production but budgeted production is more variable than actual production.

7. The trend line of actual sales and production is increasing but on the other hand trend line of actual profit is decreasing.
8. Bottlers Nepal Ltd. has not proper practice or segregating the costs into fixed and variable or controllable and non-controllable.
9. There is lack of effective cost control programmes or techniques.
10. The profit trend of the company is not satisfactory. As compared to profit, proportion is very low with fluctuated trend.
11. The company has no detailed and systematic expenses plan. The fixed, variable and mixed expenses plan is the necessary elements for profit planning and control.
12. Bottlers Nepal Ltd. has satisfactory profitability ratio based on different factors which means better utilization of total resources.
13. The company has not maintained the standard ratio for the current ratio and quick ratio that reflect the inefficient for the payments of short-term obligation.

5.3 Recommendations

Based on research study the following suggestions are recommended in this part to develop the mechanism of sales and production budgeting as a part of profit planning, to improve the budgeting system and practices of revenue and cost.

1. Bottlers Nepal Ltd. should be prepared sales budget on the realistic ground. Sales forecasting should be made after analyzing all variable that affect the sales of BNL.
2. Bottlers Nepal Ltd. should be considered cost volume profit relationship while developing the sales plan and strategy. To maintain BEP, the company should be control its high fixed cost and variable cost and increase its sales revenue.

3. Finally Bottlers Nepal Ltd. should practice the approach of PPC scientifically and systematically only after considering, evaluating and analyzing relevant variables, factors, environments like PPC's all aspects, internal strength and weakness, external threats and opportunities, and only then sales and production budgeting becomes a reliable tool of profit planning and control.
4. The participative management can play the important role in implementation of decisions. Therefore the company should try to involvement of more personnel in decision making process as far as possible. The CVP and PPC manuals should be communicated from top lower levels of the company.
5. To strengthen the competitiveness of BNL and to carry out PPC activities, the company should use the profit planning and controlling tools. For budgeting activities tools like CVP analysis should consider for planning.
6. Finally, a system of periodical performance report should be strictly followed to be conscious about poor performance and take corrective actions immediately.

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APPENDIXES

Appendix 1

Statistical Measurements of Budgeted Sales and Actual Sales

Fiscal Year	Budgeted Sales (X)	Actual Sales (Y)	U=X-X [^]	V=Y-Y [^]	U ²	V ²	U*V
2004/05	567.00	535.50	-214.40	-169.82	45967.36	28838.83	36409.41
2005/06	670.00	609.66	-111.40	-95.66	12409.96	9150.84	10656.52
2006/07	740.00	632.12	-41.40	-73.20	1713.96	5358.24	3030.48
2007/08	810.00	746.58	28.60	41.26	817.96	1702.47	1180.06
2008/09	1120.00	1002.72	338.60	297.40	114649.96	88446.76	100699.64
Total	3907.00	3526.58	0.00	-0.02	175559.20	133497.14	151976.12

Statistical tools	Budgeted Sales (X)	Actual Sales (Y)
Arithmetic Mean, $(\bar{X}) = \frac{\sum X}{N}$	$= \frac{3907}{5}$ = 781.40	$= \frac{3526.58}{5}$ = 705.32
Standard Deviation, $(\dagger_x) = \sqrt{\frac{\sum U^2}{N-1}}$	$= \sqrt{\frac{\sum 175559.2}{5-1}}$ = 209.50	$= \sqrt{\frac{\sum 133497.14}{5-1}}$ = 182.69
Coefficient of Variation, $(CV_x) = \frac{\dagger_x}{\bar{X}} \times 100$	$= \frac{209.50}{781.40} \times 100$ = 26.81%	$= \frac{182.69}{705.32} \times 100$ = 25.90%
Coefficients Correlation, $(X_{xy}) = \frac{\sum UV}{\sqrt{\sum U^2} \sqrt{\sum V^2}}$	$= \frac{\sum 151976.12}{\sqrt{\sum 175559.2} \sqrt{\sum 133497.14}}$ = 0.9927	
Probable Error, $(PE) = 0.6745 \times \frac{1 - X^2}{\sqrt{N}}$	$= 0.6745 \times \frac{1 - 0.9927^2}{\sqrt{5}}$ = 0.0044	
Regression Equation, $Y - \bar{Y} = X_{xy} \frac{\dagger_y}{\dagger_x} (X - \bar{X})$	$Y - 705.32 = 0.9927 \times \frac{182.69}{209.50} (X - 781.40)$ Y = 28.8911 + 0.8657 * X	

Appendix 2

Statistical Measurements of Budgeted Production and Actual Production

Fiscal Year	Budgeted Production (X)	Actual Production (Y)	U=X-X [^]	V=Y-Y [^]	U ²	V ²	U*V
2004/05	320.00	308.34	-461.40	-396.98	212889.96	157592.33	183166.11
2005/06	405.00	376.17	-376.40	-329.15	141676.96	108337.09	123890.55
2006/07	425.00	371.35	-356.40	-333.97	127020.96	111537.30	119027.62
2007/08	465.00	393.42	-316.40	-311.90	100108.96	97280.99	98684.84
2008/09	530.00	472.13	-251.40	-233.19	63201.96	54376.64	58623.46
Total	2145.00	1921.42	-1762.00	-1605.18	644898.80	529124.34	583392.59

Statistical tools	Budgeted Production (X)	Actual Production (Y)
Arithmetic Mean, $(\bar{X}) = \frac{\sum X}{N}$	$= \frac{2145}{5}$ $= 429.00$	$= \frac{1921.42}{5}$ $= 384.28$
Standard Deviation, $(\dagger_x) = \sqrt{\frac{\sum U^2}{N-1}}$	$= \sqrt{\frac{\sum 644898.80}{5-1}}$ $= 77.41$	$= \sqrt{\frac{\sum 529124.34}{5-1}}$ $= 58.74$
Coefficient of Variation, $(CV_x) = \frac{\dagger_x}{\bar{X}} \times 100$	$= \frac{77.41}{429.00} \times 100$ $= 18.04\%$	$= \frac{58.74}{384.28} \times 100$ $= 15.29\%$
Coefficients Correlation, $(X_{xy}) = \frac{\sum UV}{\sqrt{\sum U^2} \sqrt{\sum V^2}}$	$= \frac{\sum 583392.59}{\sqrt{\sum 644898.80} \sqrt{\sum 529124.34}}$ $= 0.9746$	
Probable Error, $(PE) = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$	$= 0.6745 \times \frac{1 - 0.9746^2}{\sqrt{5}}$ $= 0.0151$	
Regression Equation, $Y - \bar{Y} = r_{xy} \frac{\dagger_y}{\dagger_x} (X - \bar{X})$	$Y - 384.28 = 0.9746 \times \frac{58.74}{77.41} (X - 429)$ $Y = 67.0162 + 0.7395 * X$	

Appendix 3
Actual Profit Trend Line by Regression Analysis

Fiscal Year	Actual Profit (Y)	Deviation of FY (X)	X ²	XY	Trend Value (Yc)
2004/05	48.61	-2.00	4.00	-97.22	35.13
2005/06	19.37	-1.00	1.00	-19.37	32.59
2006/07	21.60	0.00	0.00	0.00	30.05
2007/08	30.23	1.00	1.00	30.23	27.51
2008/09	30.46	2.00	4.00	60.92	24.97
Total	150.27	0.00	10.00	-25.44	
Where, Y= actual profit X= time a = intercept of y b = slope of trend line or growth rate	$a = \frac{\sum X}{N} = \frac{\sum 150.27}{5} = 50.09$				
	$b = \frac{\sum XY}{\sum X^2} = \frac{\sum -25.44}{10} = -2.54$				
	Yc=a+bx	30.05-2.54*x			

Appendix 4

Relation between Actual Sales and Actual Profit

Fiscal Year	Actual Sales (X)	Actual Profit (Y)	U=X-X [^]	V=Y-Y [^]	U ²	V ²	U*V
2004/05	535.50	48.61	-245.90	-656.71	60466.81	431268.02	161484.99
2005/06	609.66	19.37	-171.74	-685.95	29494.63	470527.40	117805.05
2006/07	632.12	21.6	-149.28	-683.72	22284.52	467473.04	102065.72
2007/08	746.58	30.23	-34.82	-675.09	1212.36	455750.29	23506.06
2008/09	1002.72	30.46	221.32	-674.86	48982.54	455437.37	-149360.24
Total	3526.58	150.27	-380.42	-3376.33	162440.86	2280456.12	255501.58

Statistical tools	Actual Sales (X)	Actual Profit (Y)
Arithmetic Mean, $(\bar{X}) = \frac{\sum X}{N}$	$= \frac{3526.58}{5}$ $= 705.32$	$= \frac{150.27}{5}$ $= 30.05$
Standard Deviation, $(\dagger_x) = \sqrt{\frac{\sum U^2}{N-1}}$	$= \sqrt{\frac{\sum 162440.86}{5-1}}$ $= 182.69$	$= \sqrt{\frac{\sum 2280456.12}{5-1}}$ $= 11.51$
Coefficient of Variation, $(CV_x) = \frac{\dagger_x}{\bar{X}} \times 100$	$= \frac{182.69}{705.32} \times 100$ $= 25.90\%$	$= \frac{11.51}{30.05} \times 100$ $= 38.31\%$
Coefficients Correlation, $(X_{xy}) = \frac{\sum UV}{\sqrt{\sum U^2} \sqrt{\sum V^2}}$	$= \frac{\sum 255501.58}{\sqrt{\sum 162440.86} \sqrt{\sum 2280456.12}}$ $= -0.1644$	
Probable Error, $(PE) = 0.6745x \frac{1-x^2}{\sqrt{N}}$	$= 0.6745x \frac{1-(-0.1644)^2}{\sqrt{5}}$ $= 0.2935$	

Appendix 5

Relation between Actual Production and Actual Profit

Fiscal Year	Actual Production (X)	Actual Profit (Y)	U=X-X [^]	V=Y-Y [^]	U ²	V ²	U*V
2004/05	308.34	48.61	-473.06	-656.71	223784.82	431268.02	310662.58
2005/06	376.17	19.37	-405.23	-685.95	164208.11	470527.40	277964.77
2006/07	371.35	21.6	-410.05	-683.72	168142.64	467473.04	280360.75
2007/08	393.42	30.23	-387.98	-675.09	150527.70	455750.29	261921.83
2008/09	472.13	30.46	-309.27	-674.86	95646.70	455437.37	208712.91
Total	1921.42	150.27	-1985.58	-3376.33	802309.97	2280456.12	1339622.85

Statistical tools	Actual Production (X)	Actual Profit (Y)
Arithmetic Mean, $(\bar{X}) = \frac{\sum X}{N}$	$= \frac{1921.42}{5}$ $= 384.28$	$= \frac{150.27}{5}$ $= 30.05$
Standard Deviation, $(\dagger_x) = \sqrt{\frac{\sum U^2}{N-1}}$	$= \sqrt{\frac{\sum 802309.97}{5-1}}$ $= 58.74$	$= \sqrt{\frac{\sum 2280456.12}{5-1}}$ $= 11.51$
Coefficient of Variation, $(CV_x) = \frac{\dagger_x}{\bar{X}} \times 100$	$= \frac{58.74}{384.28} \times 100$ $= 15.29\%$	$= \frac{11.51}{30.05} \times 100$ $= 38.31\%$
Coefficients Correlation, $(X_{xy}) = \frac{\sum UV}{\sqrt{\sum U^2} \sqrt{\sum V^2}}$	$= \frac{\sum 1339622.85}{\sqrt{\sum 802309.97} \sqrt{\sum 2280456.12}}$ $= -0.4348$	
Probable Error, $(PE) = 0.6745x \frac{1-x^2}{\sqrt{N}}$	$= 0.6745x \frac{1-(-0.4348)^2}{\sqrt{5}}$ $= 0.2446$	

Appendix 6
Multiple Correlations between Actual Sales, Production and Profit

Fiscal Year	Actual Sales (X)	Actual Production (Y)	Actual Profit (Z)	$x = X - X^{\wedge}$	$y = Y - Y^{\wedge}$	$z = Z - Z^{\wedge}$	x^2	y^2	z^2	xy	yz	zx
2004/05	535.50	308.34	48.61	-169.82	-75.94	18.56	28838.83	5766.73	344.47	12895.96	-1409.43	-3151.86
2005/06	609.66	376.17	19.37	-95.66	-8.11	-10.68	9150.84	65.71	114.06	775.42	86.57	1021.65
2006/07	632.12	371.35	21.60	-73.20	-12.93	-8.45	5358.24	167.24	71.40	946.62	109.28	618.54
2007/08	746.58	393.42	30.23	41.26	9.14	0.18	1702.47	83.56	0.03	377.17	1.62	7.31
2008/09	1002.72	472.13	30.46	297.40	87.85	0.41	88446.76	7717.97	0.17	26127.18	35.93	121.64
Total	3526.58	1921.42	150.27	-0.02	0.02	0.02	133497.14	13801.21	530.14	41122.35	-1176.03	-1382.72
Mean	705.32	384.28	30.05									
Std Deviation	182.69	58.74	11.51									

Appendix 7
Details of Calculation for cost volume profit analysis

Fiscal Year	Sales Revenue	Variable COGS	Contribution Margin	P/V Ratio	Total Fixed Cost	BEP Sales	Margin of Safety	MOS Ratio
2004/05	535.50	350.49	185.01	34.55%	145.60	421.43	114.07	21.30%
2005/06	609.66	445.55	164.11	26.92%	146.58	544.54	65.12	10.68%
2006/07	632.12	436.72	195.40	30.91%	160.83	520.29	111.83	17.69%
2007/08	746.58	455.13	291.45	39.04%	243.54	623.85	122.73	16.44%
2008/09	1002.72	621.89	380.83	37.98%	279.63	736.28	266.44	26.57%
Total	3526.58	2309.79	1216.79	169.40%	976.18	2846.38	680.20	92.69%

Appendix 8

i. Gross Profit Margin Ratio

Fiscal Year	Actual Sales	Gross Profit	Ratio
2004/05	535.50	229.02	42.77%
2005/06	609.66	233.39	38.28%
2006/07	632.12	273.74	43.31%
2007/08	746.581	291.447	39.04%
2008/09	1002.72	380.826	37.98%

ii. Operating Profit Ratio

Fiscal Year	Actual Sales	Operating Profit	Ratio
2004/05	535.50	102.3	19.10%
2005/06	609.66	80.06	13.13%
2006/07	632.12	105.06	16.62%
2007/08	746.581	49.228	6.59%
2008/09	1002.72	131.894	13.15%

iii. Net Profit Margin Ratio

Fiscal Year	Actual Sales	Actual Profit	Ratio
2004/05	535.50	48.61	9.08%
2005/06	609.66	19.37	3.18%
2006/07	632.12	21.6	3.42%
2007/08	746.581	30.23	4.05%
2008/09	1002.72	30.46	3.04%

iv. Return on Shareholder's Equity

Fiscal Year	Total Shareholders Equity	Actual Profit	Ratio
2004/05	695.93	48.61	6.98%
2005/06	705.60	19.37	2.75%
2006/07	727.16	21.6	2.97%
2007/08	529.03	30.23	5.71%
2008/09	539.82	30.46	5.64%

v. Return on Total Assets

Fiscal Year	Total Assets	Actual Profit	Ratio
2004/05	1036.05	48.61	4.69%
2005/06	1038.41	19.37	1.87%
2006/07	901.18	21.6	2.40%
2007/08	1043.21	30.23	2.90%
2008/09	1027.58	30.46	2.96%

Appendix 9

i. Current Ratio

Fiscal Year	Total Current Assets	Total Current Liabilities	Ratio
2004/05	506.43	340.12	1.49
2005/06	532.39	332.85	1.60
2006/07	447.83	174.02	2.57
2007/08	586.98	416.30	1.41
2008/09	636.51	594.87	1.07

ii. Quick Ratio

Fiscal Year	Total Quick Assets	Total Current Liabilities	Ratio
2004/05	144.67	340.12	0.43
2005/06	93.38	332.85	0.28
2006/07	137.93	174.02	0.79
2007/08	299.74	416.30	0.72
2008/09	350.97	594.87	0.59