

CHAPTER – I

INTRODUCTION

1.1 Background of the Study

Inventory management is primarily about specifying the shape and percentage of stocked goods. It is required at different locations within a facility or within many locations of a supply network to precede the regular and planned course of production and stock of materials.

The scope of inventory management concerns the fine lines between replenishment lead time, carrying costs of inventory, asset management, inventory forecasting, inventory valuation, inventory visibility, future inventory price forecasting, physical inventory, available physical space for inventory, quality management, replenishment, returns and defective goods, and demand forecasting. Balancing these competing requirements leads to optimal inventory levels, which is an on-going process as the business needs shift and react to the wider environment.

Inventory management involves a retailer seeking to acquire and maintain a proper merchandise assortment while ordering, shipping, handling, and related costs are kept in check. It also involves systems and processes that identify inventory requirements, set targets, provide replenishment techniques, report actual, projected inventory status, and handle all functions related to the tracking and management of material. This would include the monitoring of material moved into and out of stockroom locations and the reconciling of the inventory balances. It also may include ABC analysis, lot tracking, cycle counting support, etc. Management of the inventories, with the primary objective of determining/controlling stock levels within the physical distribution system, functions to balance the need for product availability against the need for minimizing stock holding and handling costs.

Most of the business organization became failure due to the not properly managing inventory for the production of any goods or services. If the company did not get the required materials at needed time then production, may be disturbed and fails to produce goods. Inventory is the stock material, which frequently occurs in the organization. In this industrial age each organizations has their own inventory system. There are various techniques to the selection of inventory. More inventory required large amount of investment, not only that large amount of inventory whereas keeping minimum inventory will create the problem of shortage. Therefore, inventory management plan required different types of inventory, required period and cost. Any stock that a firm keeps to make its future requirement for production and sales is called inventor. The basic reason for holding inventory is to keep up the production activities unhampered. Inventories are a part of current assets, which is used within one year, in the normal course of business operation manufacturing organization's activities generally buys and sells good. Therefore, combination of raw material, work in progress, finished goods and supplies is called inventory management. In other words, the planning coordinating and controlling activities related to the flow of inventory into through and out of an organization.

“Inventory can be defined as a stock of any land of items reserved in the store for a certain period. It constitutes the stocks of the project a company is manufacturing for sale and components that make up the product” (Pandey, 1999: 98).

1.2 Introduction of Bottlers Nepal Limited

Bottlers Nepal Limited is one of the manufacturing as well as multinational companies. Which manufactures, soft drinks that are Coke, Fanta, Lime, Sprite, Soda and drinking water under the brand name of Coca Cola. The company

carries out the soft drinks under the registered trademark of the coca cola company managed by South Africa Bottling Company, South Africa.

It is established in 1987 under the company act 1964 with area of 10648 sq. m. of land and the building of the company covers 5823 sq. m. The company over roughly 90% of the Nepalese market when compared with the other brands of the similar products. This figure is inclusive of the subsidiary company's figure.

The company has authorized share capital of Rs. 5, 00,000 thousands and paid up value per share is Rs. 100/-. It has each issued capital of Rs 3, 70,000 thousands number of share holders in this company are 37. The paid up capital is R. 1, 94,889 thousands and value per share is Rs. 100. It is one of the top ten companies listed in the NEPSE in terms of the market capitalization.

In Nepal, there are two factories under Coca Cola Company. This study of BN Limited located at Balaju. There is also subsidiary known as BN (Terai) Ltd, at Chitwan district, Nepal. BN Company Limited distributes its product throughout the Bagmati Zone. Companies do not have policy of direct distribution channel i.e. through the dealer and retailer to the consumers. This company is using two types of plant for production process. The old line has capacity of 220 bottles per minute and the recently installed is able to produce 430 bottles per minute. To maintain the leadership in the market of the company always concentrate for its raw materials from approved suppliers that are decided from head office. Raw materials like concentrate crown cock, sugar are imported from international and national market and CO₂ gas is produce in factory. The whole process i.e. raw material to finished goods is prepared by company secretly and sold without disclosures after introducing new package, the company has increased sales effort; Recently company is also looking for area of distribution but want to have more profit from the competition market. The company has its planning system but they do not forecast the sales. In last few years data we can see that sales has been increasing. The company has been able to increase the production efficiency of the plant fibbing better

outputs as compared to the previous year. The company has increased new package of its products to counter the competition. In order to stay ahead of the competition the company has been launching various types of promotional activities with financial and technical support from the coca cola company. The company is putting its full efforts into increasing the per capita consumption of its beverage in the market.

1.3 Statement of the Problem

Nepalese industries are suffering from losses and ineffective management team. However, they are not able to fully performing due to the inefficiency in resource utilization and ineffective inventory management system. Inventories are one of the resources within the physical resources. The present study will try to analyze and examine the practice in managing inventory resources of "Bottlers Nepal Limited" Effective management and control of inventory resources will help and reduce inventory cost, increase product quality and help in profitability of the organization. The proposed problems of this study are as follows.

-) Is there scientific and systematic inventory management system followed in Bottlers Nepal Ltd?
-) To what extent a scientific analysis is done to minimize the inventory costs (i.e. carrying costs and ordering costs)
-) Which inventory policy does the company adopt?
-) Is there EOQ model applied in purchasing?
-) What is the present practice of procurement and sales?

1.4 Objectives of the Study

The major objective of this study is to excess the inventory management system exercised by the company. The specific objectives are as follows.

-) To evaluate the inventory management system applied in Bottlers Nepal Ltd.
-) To find out the purchasing procedure and goods receiving process of Bottlers Nepal Ltd.
-) To explore the relationship between different variables i.e. total inventory & total assets and total purchases and inventory.
-) To find out the amount of investment on inventory in different fiscal year.
-) To provide appropriate suggestions.

1.5 Significance of the Study

Inventory is one of the important aspects to produce the product continuously. It helps to provide the goods and services as per customers demand. Therefore, it plays vital role for the customer's satisfaction, which is the focus of every business house. For the achievement of the firm's goal, proper management of inventory is needed. Proper inventory management helps to maximize the profitability do not block the inventories. A company should maintain adequate raw materials or finished goods. If slightly changes in the cost of materials it will effect in the profitability so the company should keep an adequate inventory stock of inventory by keeping adequate inventory the company able to supply whatever the demanded. It provides the scientific and systematic inventory management system. It helps to the further researcher to know about the inventories system applied by BNL. This research may be the base for them.

1.7 Limitation of the Study

This study has certain limitations, which are as follows.

-) The data have been based on five fiscal years performance of the company.

-) The study is limited to the area of inventory management of Bottlers Nepal only.
-) This is based on secondary as well as primary data.
-) The conclusion derived from the study does not ensure wider applicability in all types of manufacturing companies.

1.7 Organization of the Study

This study is dividing into five chapters, each chapter deals with the specific aspects of the study, which will be as follows.

Chapter-One: Introduction

The first chapter deals with the background of the study, introduction of companies, statement of the problems, objectives of the study, significance of the study, limitations of the study and organization of the study.

Chapter-Two: Conceptual Framework & Review of Literature

This chapter deals with conceptual framework of study and reviews of major empirical work in the area. This study is based on the framework provided by the chapter.

Chapter-Three: Research Methodology

This chapter carries out research design, nature and source of data, data gathering process, population and sample and tools for data analysis.

Chapter-Four: Presentation & Analysis of Data

This is the main part of this study. It deals with the empirical analysis of the study. Analysis is the systematic and careful examination of available facts so that certain conclusion can be drawn and inferences can be made.

Chapter-Five: Summary, Conclusion & Recommendation

This chapter is summarizes the whole spectrum of the study. It also offers recommendation for the improvement in future.

Similarly, at the front part of the study table of contents, recommendation sheet, viva voice sheet, acknowledgement, list of table and figure and abbreviation are presented and bibliography and appendices are presented at the end of the study.

CHAPTER - II

CONCEPTUAL FRAMEWORK & REVIEW OF LITERATURE

Review of literature means reviewing research studies or other relevant proposition in the related area of the study so that all the past studies their conclusions and deficiencies may be known & further research can be conducted. The main purpose of reviewing the literature is to develop some expertise in ones area to see what new contribution can be made and to receive some idea for developing a research design.

2.1 Conceptual Framework

2.2 Review of Articles/ Journals

2.3 Review of Previous Research Works

2.4 Research Gap

Although there are various studies related to inventory management regarding different organizations and available in different libraries, but review literature indicates that there are few studies devoted to inventory in Nepalese context. These few studies conducted earlier have now needed to carry out a study to assess the recent development in inventory management. This study covers the data of five years. Nobody of the earlier studies had focused on role of inventory in over all profit planning of the organization although inventory and different components of profit planning like production planning, purchase planning etc are closely related to each other. Similarly nobody had shown the relationship of inventory with sales, production and purchase although they are closely related to each other. Moreover this study has not been done by previous researcher as separately. In spite of above, multiple gaps among the

researchers view as well as there is time gap regarding the study of inventory management.

CHAPTER - III

RESEARCH METHODOLOGY

Research methodology is the way to solve systematically about the research problem (Kothari, 1998: 91). It is the process of aiming at the solution of problem through the planned and systematic dealing with collection, analysis and interpretation of fact and figures. The major objective of this study is to analyze the inventory management of BNL. For the purpose of achieving the objectives, the following methodology has been adopted which includes research design, population & sample, nature of data, data gathering procedure and presentation and analysis techniques.

3.1 Research Design

The formidable problem that follows in the task of defining the research is the preparation of the research project, popularly known as research design (Pathak, 1992: 57). The research design is the plan structure and strategy for investigation of the facts in order to arrive at conclusion. The plan is the overall scheme of program of research. It includes and outlines of what the investigator will do from writing the hypothesis and their operational implication to the financial analysis of data. This research design is plan to obtain the answer of research question through analysis of data.

This study entitles 'Inventory Management of BNL' deals with procurement sales and distribution procedure, trends of inventory management of BNL, which were the variables under the study, so the analytical and descriptive research have been applied as research design.

3.2 Population and Sample

There are large numbers of manufacturing companies in Nepal. All the manufacturing companies are the population of the study and the Only one company BNL has been selected for this study purpose which is the sample of the study.

3.3 Nature and Sources of Data

This study is mainly based on secondary data but some primary data have been used in this study. Primary data are based on interviews as well as unstructured dialogues and discussions with staff of BNL, while secondary data were collected from the following sources.

-) Published and unpublished documents related to BNL
-) Books, articles, magazine and official records of BNL
-) Studying and analyzing the annual reports of BNL

3.4 Data Gathering Procedures

Data gathering, which is most important part of the research, consists of obtaining information from somebody's hand. It is therefore very difficult activity of the whole research process. Researcher has made frequent visits to BNL office in order to collect the required data from officials. Published and unpublished documents, books, articles, magazine and the official records are the main sources of secondary information. While the primary sources consisted interviews, dialogue and discussion with the concerned parties.

3.5 Methods of Data Analysis

In this study, data collected from various sources are managed, analyzed, and presented in proper way including table, figures and graphs with proper interpretation and explanation. The inventory management techniques applied

in this study are Economics Order Quantity (EOQ), re-order level, inventory turnover ratio, and ABC analysis, which are the part of financial analysis. However, the statistical techniques included in the study are mean, standard deviation, coefficient of variation, Karl-Pearson's coefficient of correlation, and trend analysis.

3.5.1 Descriptive Analysis

Descriptive analysis consist the purchase practice, store control device and process of issuing materials in BNL.

3.5.2 Inventory Management Tools

3.5.2.1 Economic Order Quantity (EOQ)

3.5.2.2 Inventory to Total Assets (ITA)

3.5.2.3 Inventory Conversion Period (ICP)

3.5.2.4 Payable Deferred Period (PDP)

3.5.2.5 Inventory Turnover (IT)

3.5.2.6 Inventory to Current Assets (ICA)

3.5.3 Statistical Tools

3.5.3.1 Summary Measures

3.5.3.2 Coefficient of Correlation

3.5.3.3 Least Square Linear Trend Analysis

CHAPTER - IV

PRESENTATION AND ANALYSIS OF DATA

To achieve the fulfill result, available data are presented in table and graph and they are analyzed with the help of statistical, mathematical and inventory management tools and finally interpreted to explore the facts related to inventory management in BNL. In this regard mainly secondary data is taken through the financial report from 2007/08 to 2011/12.

Major Findings of the Study

Based on the data presentation and their financial and statistical analysis of BNL, the major findings related to this study have been presented below.

-) The average annual requirement is 155.32 million and average of annual purchase is 155.27 million. The annual purchase is nearly too annual requirement i.e. 99.99%.
-) The average actual sale of BNL for given five years is Rs 649.89 millions. Deviation of annual sales, calculated as standard deviation is 54.62 and 31.08 for annual sales and closing stock, respectively.
-) The correlation between sales and closing stock is -0.67, which shows the moderate degree of negative relationship correlation between actual sales and closing stock.
-) The average actual purchase is Rs.329.47 millions with standard deviation of 59.50 from average purchase and the CV is 18.06 percentages.
-) The value of correlation between purchases and closing stock shows the low degree of positive relationship between these two variables i.e. 0.17.
-) Average percentage of inventory on current assets in an overall study period is 20.85% and the standard deviation and CV are 4.22 & 20.22 percentages respectively.
-) Average % of raw material in total inventory in overall study period is 85.45% and standard deviation and CV are 9.14 & 10.69 percentages respectively.
-) The average percentage of WIP material on total inventory in overall studies period is 1.43% and standard deviation and CV are 0.52 & 35.97 percentages respectively.
-) The average percentage of finished goods inventory in total inventory in overall study period is 13.26% and standard deviation & CV are 8.85 &

66.74 percentage respectively. Similarly, average inventory of finished goods is overall study period is Rs. 11.72 million.

-) The average inventory conversion period for the study period is 97 days and the standard deviation and CV are 35.46 & 36.40 percentage respectively.
-) The average payable deferral period for the study period is 62 days and payment is made 9.73 i.e. 10 times in a year for purchase of material and labour.
-) Inventory turnover ratio is record highest, in the fiscal year 2011/012 i.e. 5.43 times and lowest in the fiscal year 2009/010 i.e. 2.9 times respectively. In average inventory turnover ratio is 101.77 times and standard deviation & CV are 1.04 & 26.9 percentage respectively.
-) In BNL the store control device adopted is Bin card, and store ledger. The company has not applied ABC analysis techniques to control various types of inventory in the store.
-) Net profit is found to be decline from Rs. 37.80 million during 2007/08 to Rs. 33.42 millions for the year 2011/012. Trend value had also shown the continuously decreasing trend of net profit for the study period.
-) Cost of goods sold for the study period is fluctuating trend. The trend analysis shows the COGS is increasing by Rs. 22.50 millions every year. The actual COGS are less compare to trend value.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATION

In this chapter the summary of this study and recommendations based on the major findings, which are derived from the analysis of financial statement of BNL and conclusion are presented.

5.1 Summary

Bottlers Nepal Limited is the leading multinational company among the manufacturing and processing company, which was established in 1987. BNL supply the quality product at right time in a reasonable price. To earn profit it is necessary to run the company efficiently, economically as well as profitably. To ensure this situation in BNL the efficient management of inventory takes vital role. So this study is concerned with in what extent the company is applying the inventory management techniques to minimize the cost of inventory, which directly affect the price of product.

Most of manufacturing company and trading company invest a huge amount of money in the form of inventor. BNL also being the manufacturing company invests huge amount of capital in form of inventory, and cost of carrying inventory is higher out of total inventory cost. The cost of inventor}' directly affects the cost of production and profitability of company. If means slight reduction in cost of inventory, decreases the production cost and ultimately increases the profitability at remarkable rate. For this, the efficient management of inventory is desirable.

This study is based on the inventory management of BNL. It is done with a view to solve the problem arises on achieving the objectives of the BNL. Here the main objective of the study is to analyze the inventory practices and to analyze the inventory management system followed by BNL. To make this study, the related literatures have been reviewed. Review of literature gives the concept of inventory management and frameworks from various books journal and articles.

The basic objective of the study is to examine the management of inventory in BNL. To fulfill the objective as described, appropriate research methodology has developed. It consists the research design, population and sample, nature and sources of data, data gathering procedures, data period covered and method of analysis. In border to carry out the study data have been basically collected from secondary sources such as annual report, official report and financial

statement provided by BNL. The primary data is also collected from with direct interviews with concerned staffs of the company to find out the problem of company and then the collected data are tabulated and presented as the states methodology. Then the analysis has been made using the descriptive analysis of inventory management and others analytical tools. This study covers only five years of financial data i.e. from 2007/08 to 2011/012. It also used the various inventory tools and statistical tools to analyze the available data.

5.2 Conclusion

Actual purchased is less than annual requirement due to competitors and external environment. The company have sufficient raw material and utilize effectively in a productions. The relationship between sales and closing stock is negative and purchase & closing stock is positive. The average value of inventory in relation to current assets is very lower therefore; the BNL does not maintain the adequate level of inventory to fulfill the demand. The average conversion period is 97 days and it is more fluctuated so the company has not fixed policy. In average inventory turnover ratio is very low. It indicates the worst inventory management system. The average payable deferral period is 62 days. It is more fluctuated which can be said that the company does not adopting the fixed policy to make payment for the labour and raw material. The average inventory turnover ratio is 3.9 times, which maintain higher level of inventory as compared to total cost of goods sold. The average trend values of inventory, RM, WIP, net profit are decreasing. The result shows that company has not been adopting an appropriate inventory policy because inventory level is not stable.

BNL has applied only bin cards and store ledger as the inventory control techniques but not applied the ABC analysis. The company does not classify the inventory cost into carrying and ordering cost. The company does not follow the economic order size purchase so the total cost of carrying and ordering the inventory is higher.

5.3 Recommendations

Based on the major findings it may be appropriate to make some suggestions and recommendation for proper management of inventory in BNL. Some of the recommendations based on the major findings are as follows.

-) The company does not purchase the raw material based on the economic order quantity. Therefore, if the company wants to minimize the inventory cost the company should use EOQ model.
-) BNL should classify the costs & maintain the economic order size, which helps to minimize the inventory cost and to increase the profit of the company.
-) Purchase plan should be prepared for different types of raw materials with the proper co-operation and co- ordination among the planning, purchasing, storing, production, marketing and sales department to avoid the excessive investment on inventory.
-) The Company should apply the selective inventory model (ABC analysis) to control the inventories in the store.
-) Lower investment on inventories in relation to current assets may create immediate crisis in the side of production in short duration unfavorable circumstances. Therefore, it is necessary to maintain the adequate level of investment on inventories.
-) In context of BNL, to increase the profit of the company, the company should make the operating and inventory management cost minimized with the use of optimal EOQ.
-) Investment in inventories in relation to total assets was only 17.58% in the case of BNL for the study period. From this, it can be concluded that in an average there is lower value of inventory in relation to total assets therefore the BNL does not maintain the adequate level of inventory to fulfill the demand.

) The average inventory turnover ratio is 3.9 times. It seems that the company maintained higher level of inventory as compared to the total cost of goods sold. Therefore, the company has to maintain the adequate level of inventory to meet the demand.

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Appendix 1
Organizational structure of Builders Nepal Limited

