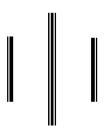
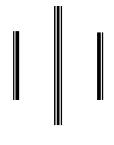
INVENTORY MANAGEMENT OF BOTTLERS NEPAL (TERAI) LIMITED



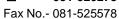
By Kedar Prasad Adhikari

Mahendra Multiple Campus, Nepalgunj MBS Exam Roll No.: 1410/2065 T.U. Regd. No.: 7-2-55-496-2003



Thesis
Submitted to
Office of the Dean
Faculty of Management
Tribhuvan University
Kirtipur

In partial fulfillment of the requirements for the degree of
Master of Business Studies (MBS)
Nepalgunj
November, 2011





Date:

TRIBHUVAN UNIVERSITY FACULTY OF MANAGEMENT

Mahendra Multiple Campus

Nepalgunj

| Ref | |
|---|--|
| RECOMMENDATIONS | |
| This is to certify that the thesis | |
| SUBMITTED BY | |
| Kedar Prasad Adhikari | |
| ENTITLED Inventory Management of Bottlers Nepal (Terai) Limited | |
| has been prepared as approved by this Department in the prescribed format of Faculty of Management. This thesis is forwarded for examination. | |
| Mr. Dol Bahadur Bhandari (Lecturer) (Thesis Supervisor) Mr. Chakra Bahadur Bom (Head of Research Department) | |
| Mr. Laxman Pokhrel (Assistant Campus Chief) | |

Fax No.

081-520278 081-525578



TRIBHUVAN UNIVERSITY FACULTY OF MANAGEMENT

Mahendra Multiple Campus

Nepalgunj

| Ref | Date: |
|---------------------------------|--|
| VIVA- | VOCE SHEET |
| We have conducted the viva- | voce examination of the thesis submitted by |
| Kedar 1 | Prasad Adhikari |
| Inventory Management | ENTITLED t of Bottlers Nepal (Terai) Limited |
| _ | inal work of the student written according to the the thesis to be accepted as partial fulfillment of ness Studies (MBS) |
| VIVA-VO | OCE COMMITTEE |
| Chairman of Research Department | |
| | |
| Member (Thesis Supervisor) | |
| Member (Thesis Supervisor) | |

DECLARATION

I hereby declare that the work reported in this thesis entitled **Inventory**

Management of Bottlers Nepal (Terai) Limited submitted to Office of Dean,

Faculty of Management, Tribhuvan University is my original work done in the form

of partial fulfillment of the requirement of Master's Degree in Business Studies

(M.B.S.) under the guidance and supervision of Mr. Dol Bahadur Bhandari,

(Lecturer) of Mahendra Multiple Campus, Nepalgunj. Hence, the sole responsibility

would be remained on me regarding this thesis for any positive or negative

implication if emerged in future.

Kedar Prasad Adhikari

Exam Roll No.: 1410/2065

T.U. Regd. No.: 7-2-55-496-2003

Mahendra Multiple Campus Nepalguni, Banke

ACKNOWLEDGEMENTS

This thesis has been as a partial requirement for the MBS. It would not be possible to complete this without the cooperation of different well wishers. The completion of the present study is a product of help and support of several hands. So, I would like to express my heartfelt gratitude, to all those respondents for their support and help.

First of all, I would like to express my sincere thanks and gratitude to my guide Mr. Dol Bahadur Bhandari and other staff of Management Faculty are also in the memory of mine. I would like to pay my sincere to Mr. Laxman Pokhrel, Department Chief of Management, Mahendra Multiple Campus, Nepalgunj, Mr. Chakra Bahadur Bom, Head of Research Department (MBS), Mahendra Multiple Campus, Nepalgunj. I could not remain without thanking to my teachers and lectures, especially to all the people who helped me during my study of MBS and during preparation of this thesis report.

I would like to express my thankfulness to all the staffs of BNTL for providing me their financial report, which is the basic source of data for the study. Special thanks goes to finance manager Mr. Samser Bahadur Kunwar, (Finance Department) and store manager Mr. Pawan Raj Bahak (Store Department) of BNTL who cooperated me during the entire study period in providing data related to study. I am heartly indebted to my Brother Mr. Fakta Ram Gurung for his financial help for the study.

I express my deep thanks Sabin Luitel of New Lumbini Pustak Pasal, Nepalgunj who helped to provide computer typing properly and timely.

TABLE OF CONTENTS

| | Page No. |
|---|----------|
| Recommendations | i |
| Viva-Voce Sheet | ii |
| Declaration | iii |
| Acknowledgements | iv |
| Table of Contents | V |
| List of Tables | ix |
| List of Figures | X |
| List of Abbreviation | xi |
| | Page No |
| CHAPTER ONE | |
| INTRODUCTION | 1-8 |
| 1.1 Background of the Study | 1 |
| 1.1.1 Introduction of Bottlers Nepal (Terai) Limited (BNTL) | 3 |
| 1.2 Statement of the Problems | 4 |
| 1.3 Objective of the Study | 5 |
| 1.4 Focus of the Study | 5 |
| 1.5 Significance of the Study | 6 |
| 1.6 Limitation of the Study | 7 |
| 1.7 Organization of the Study | 7 |
| CHAPTER TWO | |
| REVIEW OF LITERATURE | 9-48 |
| 2.1 Conceptual Framework | 9 |
| 2.1.1 Inventory Management | 9 |
| 2.1.1.1 Purchasing | 12 |
| 2.1.1.2 Storekeeping | 16 |
| 2.1.1.3 Issuing and Pricing | 17 |
| 2.1.2 Types of Inventory | 18 |

| 2.1.3 Motives of Holding Inventories | 19 |
|--|-------|
| 2.1.4 Need and Importance of Inventory Management | 21 |
| 2.1.5 Objectives of the Inventory Management | 22 |
| 2.1.6 Cost Associated with Inventory | 24 |
| 2.1.6.1 Carrying Cost or Holding Costs | 24 |
| 2.1.6.2 Ordering Cost | 26 |
| 2.1.6.3 Stock Out Cost | 28 |
| 2.1.7 Techniques of Inventory Management (Control) | 28 |
| 2.1.7.1 Economic Order Quantity (EOQ) | 29 |
| 2.1.7.2 ABC Analysis | 34 |
| 2.1.7.3 Stock Level Sub-system | 37 |
| 2.1.8 Inventory Valuation | 40 |
| 2.1.8.1 Specific Identification Method | 41 |
| 2.1.8.2 Weighted Average Cost of Capital (WACC) Method | 41 |
| 2.1.8.3 First-In-First-Out (FIFO) Method | 41 |
| 2.1.8.4 Last-In-First-Out (LIFO) Method | 41 |
| 2.1.8.5 Higher-In-First-Out (HIFO) Method | 42 |
| 2.1.8.6 Market Price Method | 42 |
| 2.1.9 Just-In-Time Inventory | 42 |
| 2.2 Related Studies on Inventory Management | 43 |
| 2.2.1 Review of Journals | 43 |
| 2.2.2 Review of Past Dissertations | 44 |
| 2.3 Research Gap | 48 |
| 2.4 Concluding Remarks | 48 |
| CHAPTER THREE | |
| RESEARCH METHODOLOGY | 49-58 |
| 3.1 Research Design | 49 |
| 3.2 Population and Sample | 50 |
| 3.3 Nature and Sources of Data | 50 |
| 3.4 Data Gathering Procedure | 50 |
| 3.5 Period of Study | 51 |
| 3.6 Method of Analysis | 51 |
| 3.6.1 Descriptive Analysis | 51 |

| 3.6.2 Inventory Management Tools | 51 |
|---|-------|
| 3.6.2.1 Economic Order Quantity (EOQ) | 51 |
| 3.6.2.2 Inventory to Total Assets (ITA) | 53 |
| 3.6.2.3 Inventory Conversion Period (ICP) | 53 |
| 3.6.2.4 Payable Deferral Period (PDP) | 54 |
| 3.6.2.5 Inventory Turnover | 54 |
| 3.6.2.6 Inventory to Current Assets (ICA) | 55 |
| 3.6.3 Statistical Tools | 55 |
| 3.6.3.1 Standard Deviation (SD) | 55 |
| 3.6.3.2 Coefficient of Variation (CV) | 56 |
| 3.6.3.3 Karl Pearson's Correlation Coefficient | 56 |
| 3.6.3.4 Time Series (Trend Analysis) | 57 |
| 3.6.3.5 Probable Error (PE) | 58 |
| CHAPTER FOUR | |
| PRESENTATION AND ANALYSIS OF DATA | 59-97 |
| 4.1 Descriptive Analysis | 59 |
| 4.1.1 Purchasing Procedure in BNTL | 59 |
| 4.1.1.1 Collection of Purchase Requisition | 60 |
| 4.1.1.2 Approval of Purchase Requisition | 61 |
| 4.1.1.3 Opening of Letter of Credit (LC) | 62 |
| 4.1.1.4 Purchase Procedure | 62 |
| 4.1.1.5 Incoming Inspection | 64 |
| 4.1.1.6 Goods Receiving Process | 65 |
| 4.1.1.7 GRN Preparation | 65 |
| 4.1.2 Store Control Device Practice | 66 |
| 4.1.2.1 Bin Cards | 66 |
| 4.1.2.2 Store Ledger | 67 |
| 4.1.2.3 ABC Analysis | 67 |
| 4.1.3 Issuing Material | 68 |
| 4.2 Inventory Management Analysis | 69 |
| 4.2.1 Annual Requirement and Purchase of Raw Material | 69 |
| 1 | 0) |
| 4.2.2 Actual and Economic Order Size | 70 |

| | 4.2.4 Relationship between Actual Sales and Closing Stock | 72 |
|----|--|--------|
| | 4.2.5 Relationship between Actual Purchase and Closing Stock | 74 |
| | 4.2.6 Relationship between Actual Sales and Actual Purchase | 76 |
| | 4.2.7 Investment in Inventories in Relation to Total Assets | 77 |
| | 4.2.8 Inventory Conversion Period | 78 |
| | 4.2.9 Payable Deferral Period | 80 |
| | 4.2.10 Inventory Turnover | 81 |
| | 4.2.11 Proportion of Inventory to Current Assets | 82 |
| | | |
| | 4.2.12 Trend Analysis | 83 |
| | 4.2.12.1 Trend Analysis of Purchase | 83 |
| | 4.2.12.2 Trend Analysis of Sales | 84 |
| | 4.2.12.3 Trend Analysis of Purchase of Raw Materials | 86 |
| | 4.2.12.4 Trend Analysis of Inventory | 87 |
| | 4.2.12.5 Trend Analysis of Raw Material | 88 |
| | 4.2.12.6 Trend Analysis of Work-in-process | 89 |
| | 4.2.12.7 Trend Analysis of Finished Goods | 90 |
| | 4.2.12.8 Trend Analysis of Cost of Good Sold (COGS) | 91 |
| | 4.2.12.9 Trend Analysis of Net Profit | 92 |
| | 4.3 Major Findings of the Study | 93 |
| C: | HAPTER FIVE | |
| | UMMARY, CONCLUSION AND RECOMMENDATION | 98-103 |
| | 5.1 Summary | 98 |
| | 5.2 Conclusion | 101 |
| | 5.3 Recommendation | 102 |
| | | |

Bibliography

Appendices

LIST OF TABLES

| TABLE N | O. TITLES | PAGE NO. |
|---------|--|----------|
| 2.1 | ABC Analysis | 35 |
| 4.1 | Annual Requirement and Purchase of Raw Material | 69 |
| 4.2 | Actual and Economic Order Size | 71 |
| 4.3 | Actual and Economic Inventory Cost | 72 |
| 4.4 | Relationship between Actual Sales and Closing Stock | 73 |
| 4.5 | Relationship between Actual Purchase and Total Closing Stock | 75 |
| 4.6 | Relationship between Actual Total Sales and Actual Total Purchase | 77 |
| 4.7 | Inventory to Total Assets of Bottlers Nepal (Terai) Limited (BNTL) | 78 |
| 4.8 | Inventory Conversion Period of BNTL | 79 |
| 4.9 | Payable Deferral Period of BNTL | 80 |
| 4.10 | Inventory Turnover of BNTL | 81 |
| 4.11 | Proportion of Inventory to Current Assets of BNTL | 82 |
| 4.12 | Trend Analysis of Purchase | 83 |
| 4.13 | Trend Analysis of Sales | 85 |
| 4.14 | Trend Analysis of Raw Material Purchase | 86 |
| 4.15 | Trend Analysis of Inventory | 87 |
| 4.16 | Trend Analysis of Raw Material | 88 |
| 4.17 | Trend Analysis of Work-in-Process | 89 |
| 4.18 | Trend Analysis of Finished Goods | 90 |
| 4.19 | Trend Analysis of Cost of Goods Sold (COGS) | 91 |
| 4.20 | Trend Analysis of Net Profit | 92 |
| 4.21 | Findings of Trend Analysis | 97 |

LIST OF FIGURES

| FIGURE NO. | TITLES | PAGE NO. |
|------------|---|----------|
| 2.1 | Economic Order Quantity | 31 |
| 2.2 | Graphical Presentation of EOQ | 33 |
| 2.3 | Graphical Presentation of ABC Analysis | 36 |
| 4.1 | Purchasing Procedure of Essentials in BNTL | 60 |
| 4.2 | Approval of Purchase Requisition of BNTL | 61 |
| 4.3 | Opening of Letter of Credit (LC) of BNTL | 62 |
| 4.4 | Purchase Procedure of BNTL | 63 |
| 4.5 | Incoming Inspection of BNTL | 64 |
| 4.6 | Goods Receiving Process of BNTL | 65 |
| 4.7 | GRN Preparation of BNTL | 66 |
| 4.8 | Issuing Material from Store in BNTL | 68 |
| 4.9 | Trend Analysis of Actual Purchase | 84 |
| 4.10 | Trend Analysis of Sales | 85 |
| 4.11 | Trend Analysis of Raw Material Purchase | 86 |
| 4.12 | Trend Analysis of Inventory | 88 |
| 4.13 | Trend Analysis of Raw Materials | 89 |
| 4.14 | Trend Analysis of Work-in-Process | 90 |
| 4.15 | Trend Analysis of Finished Goods | 91 |
| 4.16 | Trend Analysis of Cost of Goods Sold (COGS) | 92 |
| 4.17 | Trend Analysis of Net Profit | 93 |

LIST OF ABBREVIATION

 \overline{X} : Mean & : And

ABC : Activity Based Costing ABC : Always Better Control

AD : Anno Domini

AIC : Agriculture Inputs Corporation

AP : Annual Purchase AR : Annual Requirement

BNTL : Bottlers Nepal (Terai) Limited

B.S. : Bikram Sambat

C.V. : Coefficient of Variation

Dept. : Department e.g. : For Example

EOQ : Economic Order Quantity

etc : Etcetera

FIFO : First In First Out

FY: Fiscal Year

GRN: Goods Receiving Note

HCCL: Himal Cement Company Limited

HCIL: Hetauda Cement Industry

HPPC : Herbs Production and Processing Company

i.e. : That is

ITR : Inventory Turnover Ratio

LC : Letter of Credit LIFO : Last In First Out

Ltd. : Limited
M. Ton. : Metric Ton
Mgmt. : Management

MRN : Material-Receiving Note

P.E. : Probable Error

Pvt. : Private Qty. : Quantity

RDL: Royal Drug Limited

Rs. : Rupees

S.D. : Standard DeviationS.N. : Symbol Number

TCC : Total Carrying Cost
TU : Tribhuvan University
WIP : Work In Progress

Yrs. : Years