

**MANAGEMENT OF INVENTORIES IN
SUGAR INDUSTRY – A COMPARATIVE
STUDY OF SELECT SUGAR MILLS IN
NORTHERN INDIA**



**A
SYNOPSIS**

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JUSTIFICATION OF THE STUDY

Management of Inventory is the central core of materials management. The need and importance of inventory varies in direct proportion to the idle time cost of men and machinery and the urgency of requirements. If men and machinery in the factory could wait and so could customers, no inventories need be carried. But, it is highly uneconomical to keep men and machines waiting. Moreover, the requirements of modern life are so urgent that they cannot wait for long for materials to arrive after the need for them has arisen. Hence firms must carry inventories.

Because material constitute a significant part of the total production cost of a product and since this cost is controllable, to some extent, proper planning and controlling of inventories is of great importance. Inventory control is a planned method of determining what to indent, when to indent, how much to indent and how much to stock, so that purchasing, ordering and storing costs are minimum without affecting production or sales. Without proper control, inventories have a tendency to grow beyond economic limits. Funds are tied up unnecessarily in surplus stores and stocks, productive operations are stalled and finances to the plant are severely strained. Lack of control over inventory also leads to excessive consumption and wastage as operatives are liable to become careless with un-rationed supply of materials.

Every enterprise needs inventory for smooth running of its activities. It serves as a link between production and distribution processes. There is, generally a time lag between the recognition of a need and its fulfillment. The greater the time-lag, the higher is the requirements for inventory. The unforeseen fluctuations in demand and supply of goods also necessitate the need for inventory. It also provides cushion for future price fluctuations.

The investments in inventories constitute the most significant part of current assets / working capital in majority of the undertakings. Thus, it is very essential to have proper control and management of inventories. The purpose of inventory management is to ensure availability of materials in sufficient quantity as and when required and also to minimize investment in inventories.

The investments in inventories are very high in most of the undertakings, especially those engaged in manufacturing activities. The amount of investment is sometimes more in inventory than in other assets. In industries like sugar, raw materials cost is as high as, around two-third of total cost. Most part of working capital is invested in inventories. Thus, it is necessary for every management to give proper attention to inventory management. A proper planning of purchasing, handling, storing and accounting should form a part of inventory management. An efficient system of inventory management will determine –

- (a) What to purchase
- (b) How much to purchase

- (c) From where to purchase and
- (d) When to purchase
- (e) Where to store etc.

Having considered the rapid growth of sugar industry in India, it is considered that a study on the topic entitled

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should be undertaken to analyze the inventory management of this upcoming and promising industry. It is hoped that the proposed study will be most beneficial to the policy makers, the researchers, the industry and the others concerned on the whole.

RESEARCH METHODOLOGY

Research methodology adopted for completion of research work has its great importance, because the quality of results / findings of research work depend upon it. The following research methodology has been adopted for the research purposes-

SELECTION OF AREA

Uttar Pradesh is one of the largest states of India and is developing by leaps and bounds day-by-day. Various projects are in the pipeline and many others have already taken a proper shape for the overall development & progress of this historical state. And, Western U.P. is playing an important role in its overall development as integral part of Northern India. This part is famous world-wide for the production of sugar and spreading sweetness throughout the world.

In order to start his research work, the researcher adopted the **lottery system** of selecting two sugar mills from northern India. It consisted of two phases. In first phase, out of total districts of northern India, two districts were selected by lottery system. This resulted into two districts; one was **Meerut** & another **Ghaziabad**. Then in the next phase, out of total number of sugar mills running in these two districts respectively, one sugar mill each from Meerut & Ghaziabad districts were selected, again by the same lottery system. It resulted into the names of **Mawana Sugars Limited** and **Simbhaoli Sugars Limited** respectively.

One of the oldest, established and famous sugar mills i.e. "**Simbhaoli Sugar Ltd.**" has already marked its presence in the world market and the other upcoming name of "**Mawana Sugars Ltd.**" is also speedily paving its way at the world forum. Thus, the universe of the present study is about the management of inventories of these two sugar mills of Northern India.

PERIOD OF STUDY

This research work is primarily based on secondary data. Hence, it was conducted on macro level (i.e. from the financial year 2004-2005 to 2008-2009) and micro level (i.e. financial year 2008-2009).

COLLECTION OF DATA

The strong unwillingness on the part of the management of these two renowned and reputed sugar mills (to participate and aid the research work), made it difficult for the researcher to move in the desired direction most of the times. As a result, this study was turned towards the secondary data collection and is mainly based upon the information collected from various annual reports of both the sugar mills, data available on the internet etc. and that too for a time period from **2004-2005** to **2008-2009**. Thus, our research work is mainly based upon secondary data.

To obtain secondary data, visits have been made to the Indian Sugar Mills Association, Ministry of Industry & Commerce, Corporate Offices of both sugar mills etc.

TABULATION, ANALYSIS AND INTERPRETATION OF DATA AND INFORMATION

Data and information collected from different sources were tabulated chapter-wise so as to make the study systematic and scientific. Different tables and charts were prepared for the purpose to concentrate on each and every aspect of this study.

After tabulation of data or information, an analysis of each table was made using different statistical tools so that relevancy of data collected with the present study might be traced and the reliable conclusions might be drawn.

STATISTICAL TOOLS APPLIED

During the research work, different statistical tools like t-test, mean, least square method, ratios, graphic presentation, chart development etc. were used for the purpose of analyzing the data collected.

OBJECTIVES OF THE STUDY

The study has been conducted with the following objectives in the view –

1. To define the concept, importance, objectives and factors etc. of inventory and inventory management.
2. To review the views of different authors & wizards on inventory management.
3. To explain the various techniques of inventory control with their merits and demerits and to examine & determining the most suitable inventory control technique for a sugar industry.
4. To throw light on the profile of both sugar mills.
5. To analyze the inventory management in Mawana Sugars Limited.
6. To analyze the inventory management in Simbhaoli Sugars Limited.
7. To compare & analyze the inventory management of both sugar mills.
8. To bring to surface the findings on various aspects of inventory management of both sugar mills along with the suggestions for improvement of inventory management.

HYPOTHESES OF THE STUDY

The hypotheses which are to be tested during study can be summarized as under –

1. *The stock of stores & spares of Mawana Sugars Ltd. and Simbhaoli Sugars Ltd. are of the same values.*
2. *The stocks of raw materials, components etc. of both sugar mills are having same values.*
3. *The Process stocks / stock of Work in progress of Mawana Sugars Ltd. and Simbhaoli Sugars Ltd. are of the same type.*
4. *Simbhaoli Sugars Ltd. & Mawana Sugars Ltd. is having the same value of stock of finished goods.*
5. *The production quantity of Mawana Sugars Ltd. and Simbhaoli Sugars Ltd. is almost the same.*
6. *The sales quantity of both sugar mills is of the same amount.*
7. *The finished goods stock of both sugar mills is not different.*
8. *The raw materials consumption of Mawana Sugars Ltd. and Simbhaoli Sugars Ltd. is almost same.*

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PLAN OF THE STUDY

Chapter 1 Introduction

- 1.1 A Brief History of Sugar Industry in India.
- 1.2 Meaning and Concept of Inventory and Inventory Management.
- 1.3 Importance of Inventory Management.
- 1.4 Objectives of Inventory Management.
- 1.5 Factors affecting Inventory Management.
- 1.6 Objectives of the Study.
- 1.7 Limitations of the Study

Chapter 2 Review of Literature & Research Methodology

- 2.1 Review of literature available on the subject under study.
- 2.2 Research Methodology.
- 2.3 Hypotheses of the Study.

Chapter 3 Techniques of Inventory Management

- 3.1 Introduction.
- 3.2 Process of Inventory Management and Control.

- 3.3 Inventory Control Techniques.
- 3.4 Application of Inventory Management Techniques.
- 3.5 Development in Inventory Management.

Chapter 4 The Profile of Select Sugar Mills

- 4.1 Profile of Mawana Sugars Limited.
- 4.2 Profile of Simbhaoli Sugars Ltd.

Chapter 5 An Analytical Study of Inventory Management in Mawana Sugars Limited

- 5.1 Management of Inventory in Mawana Sugars Limited.
- 5.2 Inventory Turnover Ratios of Mawana Sugars Limited.
- 5.3 Inventory Holding Period of Mawana Sugars Limited.
- 5.4 Trend Analysis of Inventory Management in Mawana Sugars Limited.
- 5.5 Quantitative Trend Value Analysis.

Chapter 6 An Analytical Study of Inventory Management in Simbhaoli Sugars Limited

- 6.1 Management of Inventory in Simbhaoli Sugars Limited.
- 6.2 Inventory Turnover Ratios of Simbhaoli Sugars Limited.
- 6.3 Inventory Holding Period of Simbhaoli Sugars Limited.
- 6.4 Trend Analysis of Inventory Management in Simbhaoli Sugars Limited.
- 6.5 Quantitative Trend Value Analysis.

Chapter 7 A Comparative Study between Mawana Sugars Limited and Simbhaoli Sugars Limited

- 7.1 Comparative Analysis of Management of Inventory in Mawana Sugars Limited and Simbhaoli Sugars Limited.
- 7.2 Comparative Analysis of Inventory Turnover Ratios of Mawana Sugars Limited and Simbhaoli Sugars Limited.
- 7.3 Comparative Analysis of Inventory Holding Period of Mawana Sugars Limited and Simbhaoli Sugars Limited.
- 7.4 Comparative Trend Analysis of Inventory Management in Mawana Sugars Limited and Simbhaoli Sugars Limited.

7.5 Quantitative Trend Value Analysis.

7.6 Testing of Hypotheses.

Chapter 8 Conclusions and Suggestions

8.1 Findings on Inventory Management in
Mawana Sugars Limited and Simbhaoli
Sugars Limited.

8.2 Findings on Inventory Turnover Ratios of
Mawana Sugars Limited and Simbhaoli
Sugars Limited.

8.3 Findings on Inventory Holding Period of
Mawana Sugars Limited and Simbhaoli
Sugars Limited.

Findings on Trend Values of
Mawana Sugars Limited and Simbhaoli
Sugars Limited.

8.5 Findings on Quantitative Trend Values
of Mawana Sugars Limited and
Simbhaoli Sugars Limited

8.6 Findings Regarding Hypotheses Testing
of both Sugar Mills.

8.7 Suggestions for Mawana Sugars Limited.

8.8 Suggestions for Simbhaoli Sugars Ltd.

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