An Analysis on Inventory Management and its Control at Sri Chamundeswari Sugars Limited, Shrinivasapura, Hassan.

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ABSTRACT

The project report was carried on at Sri chamundeshawari sugar limited, on the topic "The study on analysis of inventory management and its control at Sri chamundeswari sugars limited'' Effective inventory management and control are crucial for the success of any manufacturing organization, including sugar factories. This study investigates the current inventory management practices and control at SCSL, with the aim of identifying areas of improvement and optimizing inventory levels. The project based on the both qualitative and quantitative data collection and analysis method. in this study use for statistical tool of chi-square testing and hypothisis testing.

The study reveals that the factory faces challenges in managing its inventory, including overstocking, stockout, and inefficient storage practices. The research identifies the root causes of these issues and proposes a framework for improving inventory management and control, including the implementation of just-in-time (JIT) inventory system, regular stock audits, and staff training. The study concludes that by implementing these recommendations, the sugar factory can reduce inventory costs, improve efficiency, and enhance overall performance. The research mainly focused on the inventory involved that the firm need to be faced while maintain stock and have to frame the strategies and methods to reduce the inventory, The managers its inventory in appropriate manner can be found as there is no much loss to the firm because of stock. Firm has a well-planned mechanism and strategies for managing the inventory.

KEYWORDS : Inventory Management ,Inventory Control ,Stock Management Inventory Turnover, Economic Order Quantity (EOQ),Just-In-Time (JIT) Warehouse Management, Supply Chain Efficiency, Material Handling

1. INTRODUCTION

In tdays's dynamic and competitive business environment. The study is based on the "Inventory Management" with reference to the Sri Chamundeshawari sugars Limited, Hassan. Material is very important factor of production in a manufacturing company. It is first and the most important element of cost. Direct and indirect materials purchased for stock purpose to be issued to different jobs, work orders or departments are required are treated as stock. We may also refer to the commodity used term "Inventory" which includes the stock not only of raw materials but also stores & spares, work in process, and finished goods.Legitimate control
of materials is vital from the time orders for buys of materials are put with provisions until the point when they have been devoured. The question of material control is to assault material cost exertion with the goal that cost of material when it is bought, put away and utilized. Inventory is the physical stock of item that a business or production organization keeps in hand in hand for effacing of affairs of its production inventories consist of raw materials, component parts supplies and finished assemblies which an organization purchase from an outside source and parts assemblies and finished products which the company manufacturing itself. Stock control is the task of consistently organizing receipts and issued in such route in order to protect that stock in amount or esteem are sufficient to help the present rate of utilization ever due respect to economy.

Inventory management is the branch of business management that covers the planning and control of the inventory. "Inventory" means physical stock of goods, which is kept in hands for smooth and efficient running of future affairs of an organization at the minimum cost of funds blocked in inventories. The fundamental reason for carrying inventory is that it is physically impossible and economically impractical for each stock item to arrive exactly where it is needed, exactly when it is needed. Furthermore, the study emphasizes the need for continuous assessment and adaptation of inventory control strategies to align with evolving industry trends and challenges. Overall, effective inventory management is not only crucial for maintaining operational excellence but also for supporting the company's long-term growth objectives.

2. RESEARCH METHODOLOGY

Research is an organized, systematic, data based, critical, objective scientific inquiry into a specific problem, undertaken with the purpose of finding solutions to it. The research provides the needed information that guides managers to make informed decisions to successfully deal with the problem. The research methodology study based on secondary data source of information Secondary data: internet, magazines, past records.

3. OBJECTIVES OF THE STUDY

1. To utilize maximum man power and product capacity and utilities of raw materials to produced sugar and development of the irrigation project.

2. To give good product rate to the farmer who supply sugar cane to their factory.

3. provide large scale employment.

4. LITERATURE REVIEW

Ashwini,K., & Smita,L., (2013) Material and inventory management is a key of the project or firm management which is defined as the process to provide right material at right place at right time in right quantity so as to minimize the cost.

Edward, A., (2002) Charles Atkinson This article considers the context of a population of items for which the assumption underlying the EOQ derivation holds reasonably well.

Delaunay C, Sahin E, 2007. A lots of work has been done but now if we want to go ahead we must have good visibility upon this field of research.

Hoopman,L., (2007), In this article he said that inventory optimization recognize that

different industry have different inventory profiles and requirements. Research has indicated that solutions are priced in a large range from tens of thousands of dollars to millions of dollars. **Gaur, V., Fisher, M.L., & Raman, A. (2005)** An Econometric Analysis of Inventory Turnover Performance in Retail Services studied the link between inventory management and financial performance.

5. DATAANALYSIS AND INTERPRETATION

Table :5.1 Inventory Organized In The Warehouse

SL.NO	OPTIONS	NO OF RESPONDENTS	PERCENTAGE
1	BY PRODUCT CATEGORY	37`	35.9%
2	BY DATA RECEIVED	47	45.6%
3	BY DEMAND LEVEL	19	18.4%

Table 5.1

ANALYSIS: The data reveals that the most common method for categorizing responses is by data received, with 45.6% of respondents selecting this option. This is followed by categorization by product category at 35.9%, indicating a strong emphasis on data-driven organization. In contrast, categorization by demand level is the least utilized approach, with only 18.4%, suggesting that demand considerations are less significant in the categorization process.

INTERPRETATION:

The data indicates that the majority of respondents (45.6%) categorize their information by data received, reflecting a focus on the quality and source of data. In comparison, 35.9% organize by product category, showing a significant interest in product-related classifications. Conversely, only 18.4% categorize by demand level, suggesting that demand-based considerations play a lesser role in the overall categorization strategy among respondents.

Table :5.2 What Challenges Do You Face In Managing The Warehouse Operations

SL.NO	**OPTIONS**	**NO OF RESPONDENTS**	**PERCENTAGE**
1	SPACE CONSTRAINTS	38	35.8%
2	INEFFICIENT HANDLING EQUIPMENT	35	33%
3	LACK OF REAL TIME DATA	20	18.9%
4	OTHER	13	12.3%

Table 5.2

ANALYSIS: The data indicates that space constraints are the primary concern among respondents, with 35.8% identifying it as a significant issue. Close behind, 33% cite inefficient handling equipment as a major challenge, reflecting operational inefficiencies. Additionally, 18.9% mention a lack of real-time data, while 12.3% report.

INTERPRETATION:

The data shows that the most significant challenge faced by respondents is space constraints, with 35.8% highlighting this issue. Inefficient handling equipment is also a major concern for 33% of respondents, Additionally, 18.9% point to a lack of real-time data as a critical issue, while 12.3% mention other challenges.

TABLE 5.3 Any Issue'S With Inventory Damage Or Spoilage In The Warehouse

SL.NO	**OPTIONS**	**NO OF RESPONDENTS**	**PERCENTAGE**
1	FREQUENTLY	34	32.1%
2	OCCASIONALLY	39	36.8%
3	RARELY	21	19.8%
4	NEVER	12	11.3%

Table 5.3

Chi-Square Test

Hypothesis:

- **Null Hypothesis (H0)**: There is no significant difference in the distribution of responses across the categories (the responses are evenly distributed).
- **Alternative Hypothesis (Ha)**: There is a significant difference in the distribution of responses across the categories.

Chi-Square Formula:

$\chi 2=\sum(O-E)2E$\chi^2
Where:
O : Observed frequency E : Expected frequency

OVERALL SATISIFACTION TESTING

PARTICULARS	YES	NO	ROW TOTAL
FREQUENTLY	30	4	34
OCCASIONALLY	32	7	39
RARELY	18	3	21
NEVER	10	2	12
COLUMN TOTAL	90	19	109

STATISTICAL ANALYSIS :

6. FINDINGS AND SUGGESTIONS

6.1 FINDINGS

1. The source of the data Occasionally is the most common response, with 39 respondents (36.8%), indicating that the activity occurs sporadically for most people.
2. Frequently follows, with 34 respondents (32.1%), showing it happens often for a significant portion.
3. Rarely accounts for 21 respondents (19.8%), suggesting it is uncommon for some.
4. Never is the least common response, with 12 respondents (11.3%), indicating minimal engagement in the activity. The data suggests a general trend toward occasional or frequent occurrences rather than rare or nonexistent.

6.2 SUGGESTIONS

- Adopt Advanced Technology Implementing advanced inventory management technologies such as RFID and barcoding can streamline tracking processes, reduce manual errors, and enhance real-time visibility of inventory levels.
- Optimize Warehouse Space: Expanding storage facilities or optimizing current warehouse layouts can improve the handling and storage of sugar products, minimizing spoilage and maximizing space utilization.
- Implement Just-in-Time (JIT) Inventory Practices: Adopting JIT methodologies can help reduce excess inventory and associated holding costs, ensuring that raw materials and finished products are available only when needed.
- Train Staff on Inventory Management Practices: Regular training programs for staff on the latest inventory management techniques and technologies will improve efficiency and reduce errors in stock handling.
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7. CONCLUSION :

The study on the analysis of inventory management and its control at Sri Chamundeswari Sugars Limited concludes that while the company has established a sound framework for managing its inventory, there are key areas that require further optimization. The current system, which includes ERP for inventory tracking and procurement strategies, helps the company maintain an adequate supply of raw materials and finished goods. However, challenges like limited storage capacity, seasonal fluctuations in raw material availability, and occasional inefficiencies in manual inventory handling still pose issues.

Another important aspect is the improvement of forecasting and demand planning. By leveraging real-time data analytics integrated into their ERP systems, Sri Chamundeswari Sugars can better anticipate market demand and adjust inventory levels accordingly, minimizing overstocking or stockouts. Strengthening relationships with suppliers and implementing lean practices like Just-in-Time (JIT) can also enhance the overall efficiency of the supply chain.

In conclusion, the analysis of inventory management at Sri Chamundeswari Sugars Limited reveals that effective inventory control is crucial for optimizing operational efficiency and maintaining profitability. The study highlighted the importance of implementing robust inventory management systems that facilitate accurate tracking of raw materials and finished products. By adopting just-in-time (JIT) practices and leveraging modern technology, the company can minimize excess stock and reduce holding costs.

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