



A STUDY ON PERFORMANCE ON INVENTORY MANAGEMENT WITH REFERENCE TO SRI BALASUBRAMANI INDUSTRIES

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ABSTRACT

In the manufacturing industry, effective inventory management is essential to both financial sustainability and operational success. This study explores the complexities of inventory management at one of the industry's leading companies, Sri Balasubramani Industries. Using a combination of qualitative and quantitative approaches, including surveys, interviews, and thorough data analysis, the study examines many aspects of inventory management, including procedures related to replenishment, tracking, storage, and procurement. Additionally, it seeks to reveal the subtle effects of inventory management on important performance indicators including customer satisfaction, lead time optimization, and cost reduction. In the competitive environment in which Sri Balasubramani Industries competes, efficient inventory management is a crucial differentiator. By placing inventory management in the context of the business's larger operating structure, the analysis lays the foundation for evaluating present procedures and pinpointing areas for development by highlighting the particular difficulties and opportunities the organization faces. The research gathers information about perceptions, difficulties, and possible bottlenecks in the current inventory management procedures from stakeholders at all levels of the organizational hierarchy, from frontline employees to senior management, using surveys and interviews. The core of this study is data analysis, which includes quantitative measures like the inventory turnover ratio and qualitative information from surveys and interviews. This allows for a methodical assessment of inventory management techniques.

Key words : Inventory management

INTRODUCTION

This study examines the effectiveness of inventory management in the fragrance manufacturing sector, providing insightful information on the theoretical underpinnings that support operational effectiveness and competitive advantage. Located at the nexus of supply chain logistics, consumer behaviour theory, and operations management, this study explores the special opportunities and problems associated with inventory management in the fragrance industry. This study crosses academic boundaries by combining information from several fields, including as chemistry, marketing, and logistics, to provide a comprehensive understanding of the dynamics of inventory management unique to the fragrance production industry. This research confirms established concepts in inventory management through empirical analysis, revealing industry-specific features and linkages that improve upon pre-existing theoretical frameworks. The results of this study clarify the difficulties of inventory management in the fragrance sector, emphasizing the vital roles of precise demand forecasting, batch production scheduling, and supply chain coordination. These processes span from the acquisition of raw materials to the distribution of completed products. Furthermore, this study acknowledges the influence of changing consumer preferences, legal requirements, and technology advancements while capturing the temporal and contextual dynamics influencing inventory management theory within the fragrance industry. Through the incorporation of novel technologies like scent analytics, digital scent synthesis, and blockchain traceability into theoretical discourses, this study predicts forthcoming patterns and obstacles in fragrance inventory management, thereby furnishing a path for creativity and adjustment.

LITERATURE REVIEW

1. "Inventory Management Practices and Firm Performance" by Mentzer, J.T., DeWitt, W., Keebler, J.S., Min, S., Nix, N.W., Smith, C.D., & Zacharia, Z.G. (2001):

This study examines the relationship between inventory management practices and firm performance. It explores various inventory management techniques such as Just-In-Time (JIT), Electronic Data Interchange (EDI), and Vendor Managed Inventory (VMI), and how they impact operational and financial performance metrics. The findings suggest that effective inventory management practices positively influence a firm's performance by reducing costs, improving customer service, and enhancing competitiveness.

2. "The Impact of Inventory Management Practices on Financial Performance of Sugar Manufacturing Firms in Kenya" by Kiprotich, C., Muathe, S., & Kilika, J.M. (2014):

Focused on the sugar manufacturing industry in Kenya, this study investigates the influence of inventory management practices on the financial performance of firms. It assesses various inventory management techniques such as Economic Order Quantity (EOQ), ABC analysis, and safety stock management. The results indicate that firms that implement efficient inventory management practices experience improved financial performance through reduced inventory holding costs, minimized stockouts, and enhanced liquidity.

3. "Inventory Management Practices and Operational Performance: A Study of Small and Medium-Sized Manufacturing Enterprises in Ethiopia" by Yismaw, A., & Fentahun, N. (2019):

This study examines the relationship between inventory management practices and operational performance in small and medium-sized manufacturing enterprises (SMEs) in Ethiopia. It investigates inventory control methods, inventory turnover ratios, and stockout management strategies. The findings reveal that SMEs adopting effective inventory management practices achieve higher operational performance in terms of productivity, resource utilization, and on-time delivery.

4. "The Impact of Inventory Management Practices on Financial Performance of Pharmaceutical Manufacturing Firms in Kenya" by Ondabu, I.N., Ogutu, M., & Orwa, G. (2016):

Focusing on pharmaceutical manufacturing firms in Kenya, this study investigates the impact of inventory management practices on financial performance. It evaluates inventory turnover rates, lead time management, and inventory control policies. The results suggest that firms implementing efficient inventory management practices experience improved financial performance through reduced working capital requirements, minimized holding costs, and enhanced profitability.

5. "Impact of Inventory Management on the Financial Performance of the Firm: A Study on Indian Textile Companies" by Sengupta, A. (2014):

This study assesses the influence of inventory management on the financial performance of Indian textile companies. It examines inventory turnover ratios, inventory control policies, and supply chain integration. The findings indicate that firms with effective inventory management practices achieve superior financial performance by optimizing inventory levels, reducing carrying costs, and enhancing cash flow management.

RESEARCH METHODOLOGY

Analyses of exploratory exploration have been conducted for the project. The investigation's goal is to comprehend Indian consumers' preferences and behavior with regard to organized establishments. 100 respondents are being asked structured questions on the exploratory work in order to gather primary data. This scheduled survey has both external and internal factors. The intended sample was given questionnaires, and answers were collected for data analysis.

Hypothesis

Null Hypothesis (H0): Implementation of advanced inventory forecasting techniques does not enhance inventory accuracy and does not reduce stockouts in manufacturing industries.

Alternative Hypothesis (H1): Implementation of advanced inventory forecasting techniques enhances inventory accuracy and reduces stockouts, in manufacturing industries.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	21.661 ^a	16	.041
Likelihood Ratio	20.689	16	.047
N of Valid Cases	101		

a. 16 cells (64.0%) have expected count less than 5. The minimum expected count is .01.

Interpretation

Dependent Variable: advance forecasting techniques

Independent Variable: inventory accuracy and reorder points

Degree of freedom – 16.

Significance level – 0.05

Critical value (table) - 21.661

$P < 0.05$

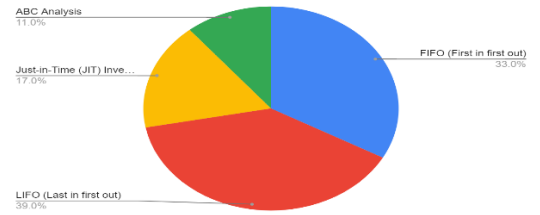
Observed value – 16.812

As the chi square have given values of p less than 0.05 significance level, the null hypothesis have been rejected and alternative hypothesis has been accepted. Therefore, Implementation of advanced inventory forecasting techniques enhances inventory accuracy and reduces stockouts, consequently improving customer satisfaction in manufacturing industries .

1. Inventory management system

	Respondents	Percentage
Just-in-Time (JIT) Inventory System	17	17%
ABC Analysis	11	11%
FIFO (First in first out)	33	33%
LIFO (Last in first out)	39	39%
Total	100	100%

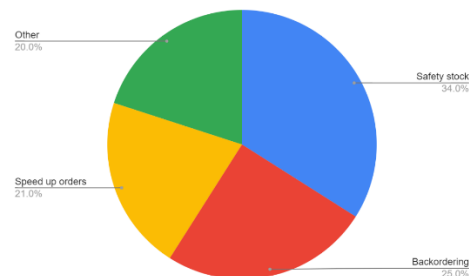
Count of 2. What methods or tools does your company currently use for inventory management



With a total of 100 respondents, the data shows the distribution of respondents' preferences among various inventory management systems. Remarkably, LIFO (Last in First Out) is the most preferred approach, chosen by 39% of participants, suggesting a strong inclination towards giving priority to the inventory that was most recently obtained. Closely behind is FIFO (First in First Out), selected by 33% of participants, indicating a significant tendency towards giving older inventory priority for depletion. With 17% and 11% of respondents choosing Just-in-Time (JIT) Inventory System and ABC Analysis, respectively, these methods are less common and may indicate a lack of emphasis on value-based classification and real-time inventory management. This distribution highlights respondents' strong inclination toward inventory management techniques that emphasize the most recent acquisition or depletion of goods, as well as their strong interest in LIFO concepts.

2. Strategies to handle stockouts

	Respondents	Percentage
Safety stock	34	34%
Backordering	25	25%
Speed up orders	21	21%
Other	20	20%
Total	100	100%



According to the data, 34% of respondents selected safety stock as their preferred inventory management technique, demonstrating a high preference for keeping a buffer to handle uncertainty. With 25% of respondents, backordering is the second most popular option, indicating that a sizable portion of respondents are ready to postpone orders in order to lower holding costs. Order expediting is chosen by 21% of respondents, indicating that although some people value prompt restocking, it is not as popular as alternative approaches. Finally, 20% of respondents employ a variety of alternative tactics, demonstrating the variety of inventory management techniques adapted to particular organizational requirements.

FINDINGS AND RECOMMENDATIONS

- Use a Just-In-Time (JIT) inventory system to order inventory only when needed, saving carrying costs and increasing efficiency.
 - To find the ideal order amount that reduces overall inventory costs, apply the Economic Order amount model.
 - Keep safety stock on hand to protect against unforeseen changes in demand or interruptions in the supply chain.
 - Build strong ties with suppliers to guarantee prompt delivery and high-quality stock.
- Employ inventory tracking software or methods to keep an eye on movements, stock levels, and replenishment efficiency.
- Reduce the chance of overstocking or stockouts by precisely forecasting demand using past data and market trends.
 - Try to get suppliers to shorten lead times so that less inventory is shipped or needs to wait to be refilled.
 - To strike a compromise between economies of scale and the requirement for flexibility and responsiveness, optimize batch and lot sizes.
 - Using lead times, demand fluctuation, and other variables to determine which inventory management techniques are best for each category.

CONCLUSION

In this study the analytical data on inventory management preferences from this survey, Sri Balasubramani Industries may successfully optimize its processes and improve inventory management. There is no shortage of options for maximizing inventory turnover and cost control, as seen by the large percentages of respondents who preferred both First in First Out (FIFO) and Last in First Out (LIFO). The business may guarantee effective inventory use while lowering holding costs and reducing obsolescence risk by putting these well-liked strategies into practice. Furthermore, the comparatively reduced inclination towards Just-in-Time (JIT) Inventory System and ABC Analysis suggests that Sri Balasubramani Industries should investigate alternate approaches customized to its own operational needs. All things considered, Sri Balasubramani Industries is in a good position to improve its inventory management procedures and promote operational excellence since it has a wide variety of inventory management techniques at its disposal and a thorough awareness of industry preferences.

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