Dr. P Pon Meenakshi
Professor, Department of
Management Studies, Nehru
College of Management, Tamil
Nadu, India

Dr. Sreeja J
Assistant Professor,
Department of Management
Studies, Nehru College of
Management, Tamil Nadu,
India

Dr. E Muthukumar
Professor, Department of
Management Studies, Nehru
College of Management, Tamil
Nadu, India

Vignesh V
MBA Final Year Student,
Department of Management
Studies, Nehru College of
Management, Tamil Nadu,
India

A study on inventory management and control at titan company Limite, Hosur

P Pon Meenakshi, Sreeja J, E Muthukumar and Vignesh V

Abstract
This study titled "Inventory Management and Control at Titan Company Limited" examines how effectively Titan manages its inventory to support operational efficiency and financial performance. The research is based on secondary data collected from Titan's annual reports and financial statements for the period 2016-2025. Analytical tools such as Inventory Turnover Ratio, Trend Analysis, ABC Analysis, and Discounted Cash Flow (DCF) Analysis were applied to evaluate stock utilization, cost control, and working capital efficiency. The findings reveal that Titan maintains a moderate and stable inventory turnover, while the ABC analysis highlights that Category A and B items account for the majority of inventory value, requiring focused monitoring. The DCF results indicate strong cash flow generation and long-term financial sustainability. This study concludes that efficient inventory management plays a crucial role in improving profitability, minimizing holding costs, and enhancing the overall performance of Titan Limited Keywords.

Keywords: Inventory management, inventory turnover ratio, ABC analysis, trend analysis, DCF analysis, titan company limited

Introduction

Inventory management plays a crucial role in ensuring the smooth functioning of business operations. It involves planning, controlling, and monitoring the levels of raw materials, work-in-progress, and finished goods to ensure uninterrupted production and timely customer delivery. Effective inventory management helps organizations minimize holding costs, reduce wastage, improve cash flow, and maximize profitability.

Titan Company Limited, a leading lifestyle brand under the Tata Group, operates in diverse business segments such as watches, jewellery, eyewear, and smart accessories. With a wide product portfolio and large retail network, managing inventory efficiently is essential for meeting market demand and maintaining operational efficiency. Titan uses modern inventory management techniques and systems such as SAP ERP, Just-in-Time (JIT), ABC Analysis, and Economic Order Quantity (EOQ) to optimize stock levels and streamline supply chain activities.

This study aims to analyze how Titan manages its inventory over time and how it influences the organization's financial and operational performance. By applying analytical tools such as Inventory Turnover Ratio, Trend Analysis, ABC Analysis, and DCF Analysis, the research evaluates stock efficiency, cost control, and working capital utilization. The study highlights the importance of inventory control in improving profitability and sustaining competitive advantage.

Objectives

- To assess how efficient inventory management practices influence Titan's operational performance.
- To analyze key inventory control techniques adopted by Titan Limited for enhancing productivity and cost optimization.
- To examine how inventory management efficiency influences financial performance.
- To identify inventory control challenges and suggest effective improvement strategies.

Corresponding Author:
Dr. P Pon Meenakshi
Professor, Department of
Management Studies, Nehru
College of Management, Tamil
Nadu, India

Limitations of the study

- The restricted to select inventory metrics (e.g., turnover, stock levels) and deliberately excluded strategic elements like procurement and supplier, thus not representing the full system.
- A short timeframe and limited resources prevented comprehensive, long-term data collection and the analysis of crucial variables like seasonal and demand fluctuations.
- relied primarily on monetary value and excluded critical multi-criteria factors like lead time variability and obsolescence risk, potentially resulting in sub-optimal recommendations.
- company reports, journals, and online data introduces risks of data inconsistency, bias, and outdated findings, affecting the reliability of the study's conclusions.

Review of literature

1. Guo, Liu, Song, and Wang (2025) [1] in their study titled "Supply Chain Resilience from the Inventory Management Perspective" explored how adaptive inventory systems enhance supply chain stability and responsiveness under uncertain market conditions. The research emphasized that flexible inventory strategies-such as safety stock adjustments, dynamic reorder policies, and multi-sourcing-play a vital role in mitigating risks associated with demand fluctuations and supply disruptions. The authors particularly focused on how resilient inventory management practices help firms respond effectively during crises such as pandemics, raw material shortages, or geopolitical instability. Their findings revealed that organizations with data-driven and adaptive inventory models exhibit stronger operational continuity and customer satisfaction, even during unexpected shocks. The study concluded that resilient inventory systems are fundamental for achieving long-term supply chain sustainability and competitiveness.

2. Singh, Solanki, Sharma, and Singh (2024) [2] proposed an integrated framework for managing demand and supply uncertainties through advanced inventory control mechanisms. Their research emphasized the importance of balancing service quality and cost efficiency by combining traditional and modern inventory management techniques. Specifically, the study suggested using hybrid models, integrating Economic Order Quantity (EOQ) with ABC analysis, to effectively manage both slow-moving and fast- moving items within an organization. This combination enables businesses to optimize stock levels, reduce wastage, and maintain customer satisfaction. The authors also stressed that technological adoption, including digital monitoring and forecasting tools, plays a crucial role in improving responsiveness, accuracy, and transparency in stock replenishment. The study concluded that a blended inventory approach supported by technology enhances decision-making and operational performance across the supply chain.

3. Budiyanto and Muslim (2024) [3] investigated the impact of modern digital technologies-specifically Radio Frequency Identification (RFID) and the Internet of Things (IoT)-on inventory visibility and operational efficiency. Their research demonstrated that automation tools enable real-time tracking, reduce manual intervention, and significantly improve data accuracy. By integrating IoT sensors and RFID scanners with cloud-based management systems, firms gain instant visibility of inventory movement across multiple locations. The study found that such systems not only minimize stock discrepancies and human error but also facilitate faster and more informed decision-making by managers. Additionally, the authors highlighted that digital integration enhances traceability and supply chain coordination, particularly in large-scale retail and manufacturing operations. The research concluded that technological automation is a key driver of inventory accuracy, cost reduction, and overall supply chain efficiency.

4. Asrol (2024) [4] examined the role of automation and Industry 4.0 innovations in transforming traditional inventory and supply chain systems. The study identified that technologies such as predictive analytics, artificial intelligence (AI), and machine learning-based forecasting substantially reduce inefficiencies by predicting demand fluctuations with higher accuracy. Asrol's research revealed that smart inventory systems help firms maintain optimal stock levels, avoid overproduction, and reduce excess storage costs. The author also emphasized that organizations implementing digital automation frameworks experience improvements in productivity, cost control, and decision-making efficiency compared to conventional manual systems. The study concluded that embracing Industry 4.0 technologies leads to agile, data-driven, and resilient inventory management, which ultimately enhances competitiveness and operational excellence.

5. Cao (2023) [5] conducted a comprehensive review on collaborative inventory management practices among suppliers and distributors, focusing on ways to improve coordination and reduce holding costs across the supply chain. The study centered on the Vendor Managed Inventory (VMI) model, highlighting that mutual trust, transparency, and data sharing are vital for its success. The findings revealed that collaborative planning and real-time information exchange among supply chain partners enhance operational synchronization and minimize inefficiencies. By integrating shared data analytics, firms can reduce bullwhip effects, improve resource utilization, and respond more effectively to demand fluctuations. The study concluded that collaborative inventory management fosters cost efficiency, supply chain visibility, and long-term partner relationships, making it a critical strategy for competitive advantage.

Research Methodology

This study follows a descriptive research approach to analyze the inventory management practices of Titan Limited. The research evaluates inventory efficiency, control techniques, and their impact on operational performance using historical company data. The study is entirely based on secondary data collected from Titan's annual reports, financial statements, official website, journals, and credible online sources. A 10-year period (2016-2025) is considered to identify trends in inventory turnover, valuation, and working capital efficiency. The collected data is analyzed using tools such as Inventory

Turnover Ratio, Trend Analysis, DCF Analysis, and ABC Analysis to assess performance and derive meaningful conclusions.

Research Design
The descriptive research design is the overall blueprint or plan that outlines how the study is conducted to achieve its objectives. It provides a framework for collecting, analyzing, and interpreting the data in a systematic way.

Secondary data
Secondary data, which refers to information already collected and published by reliable sources. For this project, data was obtained from Titan Limited's annual reports, financial statements, company website, journals, and descriptive research articles. The data covers a period of ten years (2016-2025) and is used for analysis to evaluate Titan's inventory management performance, financial ratios, and operational control efficiency. This method is suitable because it provides verified and authentic data for meaningful analysis.

Findings
Inventory Turnover Ratio
Titan's inventory turnover ranged between 2.2 to 2.9 times, indicating moderate efficiency in converting inventory into sales. The dip in 2025 suggests higher stock accumulation and slower movement.

Trend Analysis (Sales & Profit)
Net Sales and Net Profit showed a consistent upward trend from 2016-2025. This reflects strong demand growth and effective supply chain management.

ABC Analysis
Category A and B items account for about 85% of total inventory value, requiring higher attention and control. Category C items contribute low value and can be managed with simple monitoring.

Discounted Cash Flow (DCF) Analysis
The DCF results indicate growing free cash flows and positive present value, showing Titan's strong financial stability and long-term value creation.

Suggestions
Titan Limited should continue to strengthen its inventory planning and forecasting by using digital tools like SAP, automated demand forecasting, and real-time inventory tracking to avoid overstocking and stock shortages.

- The company can improve its Inventory Turnover Ratio by aligning purchase and production schedules more closely with actual sales trends, which will help reduce holding costs and improve cash flow.
- Regular ABC Analysis should be performed to focus strict control on high-value (Category A) items, moderate control on Category B items, and simpler monitoring for low-value (Category C) items, ensuring efficient use of working capital.
- Titan should train employees involved in warehouse and inventory operations to ensure accurate recording, better handling, and timely stock movement, which will enhance operational efficiency.
- Periodic review of safety stock levels and reorder points

is recommended, especially during festival seasons and new product launches, to maintain uninterrupted product availability and customer satisfaction.

Conclusion
This study concludes that effective inventory management plays a crucial role in improving operational efficiency and financial performance at Titan Limited. The analysis shows that Titan maintains moderate inventory turnover, steady sales growth, and strong cash flow, supported by structured supply chain and ERP systems. ABC analysis revealed that a small portion of high-value items significantly influences total inventory cost, indicating the need for focused control. Although the company performs efficiently, improving turnover speed and optimizing working capital can further enhance profitability. Overall,

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