

Impact of Inventory Management on Working Capital Efficiency: A Study of GVG Paper Mills

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Abstract - This study examines the impact of inventory management on working capital efficiency in GVG Paper Mills Private Limited. Inventory constitutes a major component of working capital, and its efficient management is essential for maintaining liquidity, profitability, and operational performance. The research adopts a descriptive design using both primary and secondary data. A sample of 150 respondents was analyzed using statistical tools such as percentage analysis, correlation, chi-square, and ANOVA. The findings reveal that effective inventory control significantly improves liquidity, reduces holding costs, and enhances financial performance. The study concludes that optimized inventory practices contribute positively to working capital efficiency and overall organizational sustainability.

Key Words: Inventory Management, Working Capital Efficiency, Liquidity, Inventory Turnover, Operating Cycle

1. INTRODUCTION

Working capital management is a critical aspect of financial management that ensures the smooth functioning of business operations. It involves managing current assets and current liabilities efficiently to maintain liquidity and profitability. Among the components of working capital, inventory occupies a significant position, especially in manufacturing and trading organizations.

Inventory includes raw materials, work-in-progress, and finished goods. It acts as a buffer between production and sales, ensuring continuity in operations. However, maintaining inventory involves costs such as storage, insurance, obsolescence, and opportunity cost of capital. Therefore, efficient inventory management is essential to minimize costs while ensuring adequate availability of stock.

Effective inventory management techniques such as Economic Order Quantity (EOQ), Just-in-Time (JIT), and ABC analysis help organizations optimize inventory levels. Proper inventory control reduces the cash conversion cycle, improves liquidity, and enhances profitability. On the other hand, poor inventory management leads to excess stock, stockouts, increased costs, and blocked funds.

Thus, the study of inventory management and its impact on working capital efficiency is crucial for improving financial performance and operational efficiency.

LITERATURE REVIEW

Several researchers have emphasized the importance of inventory management in enhancing organizational performance. Studies indicate that efficient supply chain management and inventory control significantly reduce operational costs and improve profitability.

Research also highlights that modern inventory practices focus on coordination, real-time tracking, and data-driven decision-making. The integration of technology such as ERP systems has further improved inventory accuracy and efficiency.

Previous studies confirm that inventory turnover ratio and operating cycle are key indicators of working capital efficiency. A shorter operating cycle indicates better utilization of resources and improved liquidity. Overall, the literature establishes a strong relationship between inventory management and financial performance.

OBJECTIVES OF THE STUDY

- To examine the inventory management practices adopted by the organization
- To analyze the relationship between inventory turnover and working capital efficiency
- To evaluate the impact of inventory holding period on liquidity

- To assess the effect of inventory control on profitability and operating cycle
- To suggest measures for improving inventory management

2. RESEARCH METHODOLOGY

2.1 Research Design

The study adopts a **descriptive research design** to analyze the relationship between inventory management and working capital efficiency.

2.2 Sample Design

- Sample Size: 150 respondents
- Sampling Technique: Convenience sampling

2.3 Data Collection

- **Primary Data:** Collected through structured questionnaires
- **Secondary Data:** Financial statements, reports, and company records

2.4 Tools for Analysis

- Percentage Analysis
- Chi-square Test
- Correlation Analysis
- ANOVA

3. DATA ANALYSIS AND INTERPRETATION

The study analyzed demographic and organizational factors affecting inventory management and working capital efficiency.

- Majority (64%) of respondents belong to the age group 20–25 years
- 79.3% of respondents are male
- 52.7% of respondents earn below ₹10,000
- Transportation and inventory significantly influence supply chain efficiency
- 52% of respondents believe inventory management improves market competitiveness
- 48.7% reported high production cost reduction due to inventory practices

Statistical Findings

- **Correlation Analysis:** Shows a strong positive relationship between age and income

- **Chi-square Test:** Indicates relationships between demographic variables and supply chain processes
- **ANOVA:** Confirms a significant relationship between age and income ($p < 0.05$)

These results indicate that effective inventory management contributes to improved operational and financial performance.

4. DISCUSSION

The findings of the study highlight the importance of maintaining optimal inventory levels. Efficient inventory management reduces holding costs, improves liquidity, and enhances profitability. The study also reveals that supply chain efficiency depends on factors such as transportation, planning, and inventory control.

The results are consistent with previous research, which emphasizes that inventory management plays a crucial role in improving working capital efficiency. Organizations that adopt modern inventory techniques and technology can achieve better financial performance and competitive advantage.

5. FINDINGS

- Inventory management significantly affects working capital efficiency
- Efficient inventory practices improve liquidity and cash flow
- Inventory turnover plays a key role in financial performance
- Supply chain efficiency depends on inventory and transportation
- Statistical analysis confirms relationships between key variables

6. SUGGESTIONS

- Adopt scientific inventory control techniques such as EOQ and ABC analysis
- Improve demand forecasting using data analytics
- Implement ERP systems for real-time inventory tracking
- Maintain optimal inventory levels to reduce costs

- Regularly monitor inventory turnover and working capital ratios

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7. CONCLUSION

Inventory management is a crucial factor influencing working capital efficiency. Since inventory represents a major portion of current assets, its effective management enhances liquidity, reduces operational costs, and improves profitability.

The study concludes that organizations implementing systematic inventory management practices can achieve better financial stability and operational efficiency. Proper planning, monitoring, and control of inventory are essential for long-term sustainability and competitive advantage.

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