

A STUDY ON FINANCIAL ANALYSIS OF WORKING CAPITAL AND INVENTORY MANAGEMENT EFFICIENCY WITH SPECIAL REFERENCE TO iTREND SOLUTION

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ABSTRACT

The study focuses on analyzing the working capital management and inventory management efficiency of the organization, with special reference to iTrend Solution, an e-commerce and digital marketing firm based in Chennai. Efficient management of working capital is essential for maintaining liquidity, ensuring smooth business operations, and enhancing overall financial performance. The study evaluates key financial aspects such as liquidity position, cash flow management, and working capital components including receivables, inventory, and payables over a period of five years from 2020 to 2024. Various analytical tools such as ratio analysis, trend analysis, and cash flow analysis are used to assess the financial performance and operational efficiency of the organization. The study also examines inventory management practices using ABC analysis, EOQ, and JIT techniques. The findings indicate that while the organization maintains operational continuity, there are fluctuations in working capital and inventory levels affecting overall efficiency. The study concludes by providing practical suggestions to improve financial planning, optimize inventory control, and enhance working capital management.

Key Words: Working Capital Management, Inventory Management, Liquidity Analysis, Financial Performance, EOQ, JIT, Ratio Analysis

1. INTRODUCTION

In the modern business environment, financial management plays a crucial role in ensuring the success and sustainability of organizations. One of the most important aspects of financial management is the efficient management of working capital, which directly influences a company's liquidity, profitability, and overall financial health. Working capital represents the difference between current assets and current liabilities and reflects the organization's ability to meet its short-term obligations.

Every business, regardless of its size or industry, requires adequate working capital to carry out its day-to-day operations smoothly. Working capital is often referred to as the "lifeblood" of an organization because it ensures the continuous flow of production, sales, and revenue generation. The efficient management of working capital components — including inventory, accounts receivable, cash, trade payables, and bank overdrafts — is essential to maintain a balance between liquidity and profitability.

The importance of working capital management becomes even more significant in the e-commerce and digital marketing sector, where business operations are fast-paced and highly competitive. Companies in these sectors deal with large volumes of transactions, fluctuating demand, and continuous cash flow requirements. The advancement of technology has further transformed financial management through ERP systems and data analytics, enabling real-time monitoring and informed decision-making.

iTrend Solution is a growing organization headquartered in Chennai, Tamil Nadu, operating in the e-commerce and digital marketing industry. The company provides comprehensive digital business solutions including e-commerce product management, SEO, PPC, content writing, and marketplace management on platforms such as Amazon and Shopify. This study analyzes the working capital and inventory management efficiency of iTrend Solution using financial statements spanning 2020–2024.

2. BODY OF PAPER

2.1 Objectives of the Study

- To analyze the working capital efficiency of iTrend Solution over the period 2020–2024.
- To evaluate the liquidity position using ratio analysis and trend analysis.
- To assess the cash flow pattern from operating, investing, and financing activities.
- To examine inventory management practices through ABC Analysis, EOQ, and JIT techniques.
- To provide practical suggestions for improving working capital and inventory management efficiency.

2.2 Review of Literature

Agarwal (2021) emphasized that working capital management is a vital component of financial management, directly affecting liquidity and profitability. Efficient planning of current assets and liabilities is essential for operational stability.

Arora (2017) highlighted the direct relationship between working capital management and financial performance, stressing the importance of balancing current assets and liabilities to improve profitability without compromising liquidity.

Bansal (2018) studied liquidity management and its impact on firm performance, concluding that optimizing liquid asset proportions and managing receivables efficiently leads to sustainable business performance.

Banerjee (2019) explored inventory control techniques and their role in cost efficiency, demonstrating that ABC classification and EOQ models significantly reduce inventory costs and improve operational performance.

Chatterjee (2019) examined the JIT approach and its impact on operational efficiency, finding that synchronizing procurement with actual demand reduces holding costs and improves cash flow management.

Pandey (2016) underlined the significance of net working capital as a key indicator of short-term financial stability and recommended continuous monitoring of working capital ratios for proactive financial management.

Sharma (2024) found that working capital management practices have a significant positive relationship with firm performance, particularly in industries characterized by high operational velocity.

2.3 Research Methodology

The study adopts a descriptive research design to analyze the working capital and inventory management efficiency of iTrend Solution. The research relies on secondary data collected from the company's Balance Sheet and Cash Flow Statements for 2020–2024, supplemented by journals and books.

The analytical tools employed include: Ratio Analysis (Current Ratio, Quick Ratio, Working Capital Turnover Ratio); Cash Flow Analysis (operating, investing, and financing activities); Trend and Growth Analysis; Working Capital Component Analysis; and Inventory Management Techniques (ABC Analysis, EOQ, and JIT).

Table 1: Research Design Summary

Research Attribute	Details
Research Design	Descriptive
Data Type	Secondary Data
Sources	Company Balance Sheet & Cash Flow Statements
Period of Study	2020 – 2024 (5 Years)
Organization	iTrend Solution, Chennai
Analytical Tools	Ratio Analysis, Trend Analysis, ABC, EOQ, JIT

Source: Secondary Data

2.4 Data Analysis and Key Findings

The liquidity position of iTrend Solution was evaluated using the Current Ratio and Quick Ratio over five financial years. Table 2 presents the liquidity indicators for the period 2020–2024.

Table 2: Liquidity Analysis (2020–2024)

Ratio	2020	2021	2022	2023	2024
Current Ratio	1.98	1.85	1.54	1.89	1.76
Quick Ratio	1.12	0.96	0.81	1.10	1.03

Source: Secondary Data

Liquidity weakened significantly in 2022 as the current ratio declined to 1.54 and the quick ratio fell to 0.81, indicating limited ability to meet short-term obligations without relying on inventory. Recovery in 2023 was driven by improvement in receivable collection and inventory optimization. Stability in 2024 reflects balanced management of current assets and liabilities.

Table 3: Revenue Trend and Growth Analysis (₹ Lakhs)

Year	Revenue (₹ Lakhs)	Growth (%)	Inference
2020	180.50	—	Base Year
2021	205.80	+14.01%	Strong Growth
2022	198.40	-3.59%	Contraction
2023	228.75	+15.29%	Strong Recovery
2024	249.60	+9.11%	Stable Growth

Source: Secondary Data

Revenue grew from ₹180.5L in 2020 to ₹249.6L in 2024, recording a CAGR of approximately 6.7%. The temporary contraction of 3.59% in 2022 was associated with working capital constraints affecting service execution capacity, while the subsequent recovery of 15.29% in 2023 reflects improved financial management.

Table 4: Working Capital Components (₹ Lakhs)

Year	Receivables	Inventory	Payables	Net Working Capital	WC Turnover
2020	18.20	17.90	16.40	22.25	8.11
2021	22.35	22.85	19.60	23.80	8.65
2022	25.10	25.60	23.80	18.80	10.55
2023	23.40	23.40	22.10	28.20	8.11
2024	27.20	27.95	25.60	28.95	8.62

Source: Secondary Data

The combined rise in receivables and inventory during 2022 highlights a working capital imbalance where funds remain tied up within the operating cycle rather than circulating efficiently. The peak Working Capital Turnover Ratio of 10.55 in 2022 reflects a reduced working capital base relative to revenue, indicating potential underinvestment in operational resources rather than true efficiency gains.

Table 5: ABC Classification of Inventory

Category	% of Items	% of Inventory Value	Control Priority
A	20%	70%	High — Strict Monitoring
B	30%	20%	Moderate — Periodic Review
C	50%	10%	Low — Simplified Control

Source: Secondary Data

A-category items constitute a major portion of inventory value despite lower volume, requiring strict monitoring to avoid capital lock-in. The classification highlights that effective control over high-value items is critical for improving working capital efficiency and maintaining service continuity.

Table 6: Economic Order Quantity (EOQ) Analysis

Order Quantity (Units)	Ordering Cost (₹)	Holding Cost (₹)	Total Cost (₹)
200	25,000	2,000	27,000
400	12,500	4,000	16,500
600	8,333	6,000	14,333
707 (EOQ)	7,071	7,070	14,141
800	6,250	8,000	14,250
1,000	5,000	10,000	15,000
1,200	4,167	12,000	16,167

Source: Secondary Data

With an Annual Demand of 10,000 units, Ordering Cost of ₹500, and Holding Cost of ₹20 per unit, the Economic Order Quantity is computed as 707 units at a minimum total cost of ₹14,141. Deviations from this EOQ result in either excess inventory leading to higher holding costs or frequent ordering leading to higher ordering costs.

Table 7: Inventory Trend – JIT Analysis (₹ Lakhs)

Year	Inventory (₹ Lakhs)	YoY Change	JIT Alignment
2020	17.90	—	Moderate
2021	22.85	+27.6%	Poor
2022	25.60	+12.0%	Poor
2023	23.40	-8.6%	Improving
2024	27.95	+19.4%	Inconsistent

Source: Secondary Data

Increasing inventory levels up to 2022 indicate limited alignment between procurement and actual service demand, leading to excess stock and higher holding costs. The reduction in 2023 reflects partial adoption of JIT practices, while the subsequent rise in 2024 suggests inconsistency in demand forecasting. Effective adoption of JIT can significantly improve cash flow availability and optimize working capital utilization.

Table 8: Summary of Key Findings

Analysis Area	Key Observation	Impact
Liquidity	Current Ratio dipped to 1.54 in 2022; recovered to 1.76 by 2024	Moderate Risk
Revenue Trend	Grew from ₹180.5L to ₹249.6L; declined -3.59% in 2022	Operational Disruption
Working Capital	Peak imbalance in 2022; receivables and inventory both at highest	Capital Lock-in
WC Turnover	Peaked at 10.55 in 2022 due to reduced working capital base	Not True Efficiency
ABC Analysis	Category A (20% items) = 70% of inventory value	High Monitoring Need
EOQ Analysis	Optimal order = 707 units; deviations increase total cost	Cost Inefficiency
JIT Analysis	Inventory rose to ₹27.95L in 2024; inconsistent JIT alignment	Higher Holding Cost
Cash Flow	Operating cash flow positive but volatile across study period	Moderate Concern

Source: Secondary Data

2.5 Major Challenges

- Fluctuating working capital levels due to the absence of a structured working capital policy, resulting in inconsistent alignment between current assets and operational requirements.
- Extended receivables collection periods in certain years leading to temporary blockage of funds and impacting overall liquidity efficiency.
- Inconsistent inventory movement indicating the absence of a stable inventory control mechanism, with excess stock during 2022 leading to higher holding costs.
- Limited adoption of Just-In-Time practices, resulting in variability in inventory levels and adverse impact on cash flow.
- Uneven payables management affecting the balance between cash outflows and supplier obligations.
- Volatile operating cash flows highlighting inconsistency in core operational performance across the five-year study period.

2.6 Suggestions

- Implement a structured working capital policy to ensure better alignment between current assets and operational requirements, reducing unnecessary fluctuations.
- Strengthen receivables management by adopting stricter credit control measures and reducing collection cycles to enhance cash flow efficiency.
- Streamline inventory control through demand-based planning aligned with EOQ principles to minimize total inventory cost and avoid overstocking.
- Focus on Category A items (70% of inventory value) identified through ABC Analysis to reduce capital lock-in and ensure service continuity.
- Gradually implement JIT practices to synchronize procurement with actual demand, reducing holding costs and optimizing working capital utilization.
- Enhance cash flow planning by ensuring consistency in operating cash inflows and better coordination of investing and financing activities.

- Adopt regular financial monitoring through trend analysis and ratio evaluation to support proactive, data-driven decision-making.
- Strengthen coordination between finance, procurement, and operations departments to improve overall working capital management efficiency.

3. CONCLUSIONS

The study concludes that working capital management is a vital determinant of financial stability and operational efficiency for service-oriented organizations like iTrend Solution. The analysis of five-year financial data (2020–2024) reveals that while the organization has maintained operational continuity and achieved revenue growth from ₹180.5 lakhs to ₹249.6 lakhs, efficiency gaps exist in working capital management, liquidity planning, and inventory control. The liquidity position, though generally acceptable, witnessed a significant decline in 2022 due to rising receivables and inventory, which temporarily constrained cash flow and service delivery capacity.

Inventory management analysis using ABC Classification, EOQ, and JIT techniques identifies clear opportunities for cost reduction and efficiency improvement. A-category items commanding 70% of inventory value demand rigorous monitoring, while consistent adherence to the EOQ of 707 units can minimize total inventory costs. Full implementation of JIT practices would further reduce holding costs and improve cash conversion cycles.

Overall, the study establishes that sustainable financial performance in the e-commerce sector is governed not merely by revenue growth but by the effective management of working capital components. Adopting structured financial policies, strengthening receivables management, optimizing inventory control, and enhancing interdepartmental coordination are essential steps for iTrend Solution to achieve long-term financial stability and competitive advantage.

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