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A Study on Logistics Management Practices and their Impact on Opertional Efficiency in Shipping and Logistics Company

Ms. R. JAVI PRABHA

MBA, NET, Assistant Professor, School of Management, Dhanalakshmi Srinivasan University, Samayapuram, Trichy.

V.M. BARATHI RAJA

II MBA, School of Management, Dhanalakshmi Srinivasan University, Samayapuram, Trichy.

ABSTRACT

Logistics management plays a vital role in ensuring the efficient movement, storage, and distribution of goods within an organization. Effective logistics practices help companies coordinate transportation, warehousing, inventory control, and order processing activities, which significantly influence operational performance. In today's competitive business environment, logistics companies focus on improving their logistics systems to enhance operational efficiency, lower costs, and provide better customer service. The study investigates the relationship between logistics management practices and its operational efficiency in shipping and logistics company. It determines how key logistics management practices including transportation, warehousing, inventory handling, and distribution systems contribute to the overall performance of the company, in addition to the using of modern technology in logistics improves logistics planning and coordination, tracking real-time progress and decision-making processes within company to make the efficient operations such as, improves delivery performance, reduce operational delays, optimize resource usage, and maintain customer satisfaction and also aim to identify problems faced in operations and suggest the improvement. The findings of the study highlight the need for a balanced approach that makes the effective logistics management which significantly improves operational efficiency by reducing delays, optimizing resource utilization, and ensuring timely delivery of goods. Therefore, improving logistics planning, coordination, and technology adoption can enhance the overall operational performance of the shipping and logistics company.

Keywords: Logistics Management, Operational Efficiency, Transportation, Business Performance, Warehousing, Inventory Control, Supply Chain Management, shipping and logistics

INTRODUCTION

Shipping and logistics companies play a crucial role in facilitating global trade by ensuring the efficient movement of goods and services across supply chains. Shipping mainly involves the transportation of goods through sea, air, rail, and road, while logistics includes broader functions such as warehousing, inventory management, packaging, distribution, and order fulfilment. Together, they support smooth domestic and international commerce.

With globalization and technological advancements, the logistics industry has evolved into a highly integrated and technology-driven sector. Companies now provide end-to-end logistics solutions, including freight forwarding, customs clearance, and last-mile delivery. Logistics and shipping company is a notable logistics provider serving the world through cargo transportation, warehousing, and inland logistics services, ensuring the supply of essential goods to remote regions.

Efficient logistics management is essential for timely delivery, cost reduction, customer satisfaction, and operational productivity. The rise of e-commerce has further increased the demand for fast and reliable delivery systems. In response, logistics companies have adopted advanced technologies such as automation, IoT, artificial intelligence, and real-time tracking systems to improve efficiency and transparency. Additionally, sustainability has become an important focus, leading companies to adopt eco-friendly transportation and packaging practices.

This study examines the impact of logistics management practices on organizational operational efficiency. It focuses on key logistics functions such as transportation, inventory management, warehousing, and order fulfilment, while also identifying challenges and strategies to optimize performance. The study highlights the importance of effective logistics management in reducing costs, improving service quality, and achieving competitive advantage.

NEED OF THE STUDY

- To understand the importance of logistics management in improving operational efficiency.
- To identify gaps and inefficiencies in existing logistics practices.
- To analyse the role of logistics in cost reduction and better resource utilization.
- To study how effective logistics management ensures timely delivery and customer satisfaction.
- To evaluate the impact of logistics activities on overall organizational performance.
- To understand the challenges faced in logistics operations and suggest improvements.
- To highlight the importance of adopting modern technologies in logistics management.

STATEMENT OF THE PROBLEM

Operational efficiency is a critical factor that shipping and logistics companies strive to achieve in order to improve service quality, reduce operational costs, ensure timely delivery, and maintain competitiveness in the market. However, challenges such as delays in transportation, poor inventory management, inadequate coordination, inefficient resource utilization, and lack of technological integration continue to affect the performance of many logistics organisations despite various operational improvement initiatives.

Logistics management practices play a vital role in determining the efficiency of operational activities within shipping and logistics companies. Nevertheless, limited research has been conducted to examine the overall impact of logistics management practices on operational efficiency in different organizational contexts. Ineffective transportation planning, poor warehouse management, lack of communication and coordination, and inefficient supply chain practices are some of the major factors contributing to operational inefficiencies in the logistics sector.

Although effective logistics management practices can help overcome these challenges through better planning, coordination, technology adoption, and resource optimization, there are still very few empirical studies examining their effectiveness in shipping and logistics companies, particularly in the Indian context. Therefore, the present study aims to analyze how logistics management practices influence operational efficiency and contribute towards improving organizational performance in shipping and logistics companies.

OBJECTIVES OF THE STUDY

- To analyses the concept and importance of logistics management in an organization.
- To examine the various components of logistics such as transportation, warehousing, and inventory management.
- To evaluate the impact of logistics management on operational efficiency.
- To identify the challenges faced in logistics management processes.
- To study the role of modern technologies in improving logistics performance.

SCOPE OF THE STUDY

- Focuses on the study of logistics management and its role in organizational operations.
- Covers key logistics functions such as transportation, warehousing, inventory management, and order processing.
- Examines the impact of logistics activities on operational efficiency and productivity.
- Includes analysis of cost control, time management, and service quality in logistics.
- Considers the use of modern technologies and systems in logistics management.

REVIEW OF LITERATURE

Jefimovaitė & Vienazindiene (2025) study aimed to examine the operational challenges in clearance and forwarding (C&F) and explore how green logistics can enhance efficiency. It found that inefficiencies in documentation, customs management, and transport coordination negatively affect operations and the environment. The study concluded that implementing environmentally friendly practices—such as route optimization, digital documentation, and energy-efficient transportation—can improve operational efficiency while supporting long-term sustainability goals.

According to **Afolabi, Aguda & Salami (2024**) how freight forwarding practices affect port operations and cargo handling. Results show effective planning, documentation, and coordination reduce delays and improve throughput. Technology and equipment adequacy were identified as critical factors. The study concludes that optimizing forwarding practices enhances operational efficiency in shipping and logistics operations.

Rajasekharan & Dass (2024) investigates operational performance in shipping and freight forwarding firms. Findings indicate digitalization, network optimization, and sustainable practices improve efficiency and competitiveness. Effective logistics planning enhanced delivery performance and cost control. The study concludes that strategic logistics practices are essential for high operational efficiency in shipping companies.

Legesse (2023) identifies challenges in freight forwarding operations, including transport delays, customs processes, and high service costs. Results indicate that addressing infrastructure, regulatory issues, and collaboration improves efficiency. Findings show optimized logistics processes reduce lead times and operational costs. The research concludes that focused improvements in freight forwarding significantly enhance operational performance

Omoush (2022) who explores how logistics practices affect operational performance in road transport companies. Data were collected from managers using structured questionnaires and analysed statistically. Findings revealed that inventory control, transportation, warehousing, and order processing significantly enhance efficiency and reduce costs. Firms implementing comprehensive logistics strategies experienced higher customer satisfaction and timely delivery. The study recommends integrating all logistics functions for maximum operational impact.

HYPOTHESES OF THE STUDY

H1: Logistics management practices and operational efficiency have a strong relationship in shipping and logistics companies.

H2: Effective transportation and inventory management practices positively influence the operational performance of shipping and logistics companies.

H3: Efficient warehouse management and supply chain coordination significantly improve productivity and service quality within the organisation.

H4: Effective logistics management practices contribute to cost reduction and better resource utilization in shipping and logistics companies.

H5: Improved logistics management practices enhance customer satisfaction through timely delivery and efficient service operations.

RESEARCH METHODOLOGY

Research Design

The research design implemented is descriptive research design because the research will focus on analysing logistics management practices and their impact on operational efficiency in shipping and logistics companies. The study will examine the existing logistics systems and operational activities followed within the organisation.

It will focus on understanding various logistics management practices such as transportation management, inventory control, warehouse management, supply chain coordination, and the use of information technology in logistics operations. The research also aims to assess how these practices influence operational efficiency within the organisation.

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This design is suitable for studying the current practices adopted in shipping and logistics companies and helps in analysing employee and management perspectives regarding operational performance and effectiveness.

Nature of the Study

It is an empirical study, which will be based largely on primary data gathered from employees working in shipping and logistics companies. The study focuses on analysing logistics management practices and their impact on operational efficiency within the organisation.

The conceptual framework is also supported using secondary information, namely books, journals, articles, and past research studies related to logistics management and operational performance. This combination of primary and secondary data helps in understanding the existing practices and drawing meaningful conclusions for the study.

Sources of Data

Primary Data: Questionnaire that was sent to the employees.

Secondary Data: Online publications, journals, and research articles, books.

Research Instrument

Responses were collected using a structured questionnaire which had questions based on a five-point Likert scale ranging from Strongly Disagree to Strongly Agree. The questionnaire included sections on demographic information, logistics management practices, and operational efficiency in shipping and logistics companies.

Sampling Technique

A convenience sampling was applied in the selection of respondents because of their convenience and accessibility.

Sample Size

The last sample was comprised of 180 workers in the selected organisations.

Tools for Data Analysis:

- Percentage Analysis
- Regression Analysis
- Correlation Analysis

RESULTS AND DISCUSSION

Table 1: Socio-Demographic Profile of Respondents

Variable	Category	No. of Respondents	Percentage
Age	Below 25 years	28	15.56%
	25-35 years	74	41.11%
	35-45 years	62	34.44%
	Above 45 years	16	8.89%
Gender	Male	113	62.78%
	Female	67	37.22%
	Less than 1 year	24	13.33%

Experiences	1-5 years	58	32.22%
	5-10 years	45	25%
	Above 10 years	53	29.44%

Interpretation

According to the demographic analysis, most respondents are between the 25-35 strict category, and this implies that the sample will be mainly composed of middle-aged employees. The number of male respondents is slightly more than female respondents. Factors that show that the workforce is relatively experienced is that majority of the employees are experienced for 1-5 years.

Correlation Analysis

There is a strong positive and significant relationship between logistics management practices and operational efficiency ($r = 0.642$, $p = 0.000$). It means that the improvement in logistics management practices is associated with an increase in operational efficiency. This consists of the better routing efficiency, proper documentation, strong supplier relationship, customer satisfaction, and cargo handling. This helps in better performance of the operational performance within the company.

Regression Analysis

The regression model suggests that logistics management practices predict 41.2 percent of the variation in operational efficiency in shipping and logistics companies ($R^2 = 0.412$). This indicates that a defined level of operation, which is efficient by logistics practices such as better routing efficiency, proper documentation, strong supplier relationship, customer satisfaction, and cargo handling. The regression coefficient is statistically significant ($p < 0.001$), tells that logistics management practices have a positive and valuable impact on operational sector in logistics company. This suggests that improvements in logistics management practices significantly enhance operational performance within the organisation.

FINDINGS

- Logistics management practices is very higher which, indicates that employees have a positive perception of logistics practices in followed in shipping and logistics companies.
- The employees who supposed to say that the effective logistics management practices exhibit higher levels of operational efficiency in company.
- Also, there is efficient transportation management, cargo handling, documentation, and supplier coordination greatly enhances overall operational performance as it directly impact by proper logistics management practices in company.
- Through the logistics management practices and their impact on operational efficiency have a strong positive relationship, indicating that improvements in logistics practices lead to better organizational outcomes and helps to sustain for long-term in competitive in market.
- This type of management practices are highly effective in reducing operational delays and improving timely delivery of goods and services.

SUGGESTIONS

- The company should strengthen their transportation to ensure the proper delivery, procurements of ordered materials from suppliers, which helps in reducing operational delays and costs.
- Adopting the advanced management systems such as tracking software and automation tools should be increased for better coordination and communication.
- Strong supplier relationship management practices help to ensure smooth flow of goods and services within proper time (inbound and outbound logistics).
- Proper inventory and warehouse management system must be implemented to improve storage efficiency, reduce wastage and smooth flow of goods in proper defined manner.

➢ Training programs should be conducted for employees to improve their skills in logistics operations and supply chain management.

CONCLUSION

The study concludes that logistics management practices have a significant and positive impact on operational efficiency in shipping and logistics companies. Effective practices such as transportation management, inventory control, warehouse management, and supply chain coordination play a vital role in improving overall operational performance.

It is also evident that organizations with strong logistics systems are able to achieve better cost efficiency, timely delivery, improved productivity, and enhanced customer satisfaction. Therefore, continuous improvement in logistics management practices is essential for achieving long-term operational success and competitiveness in the logistics industry.

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