

International Advanced Research Journal in Science, Engineering and Technology

Impact Factor 8.066 

Refereed journal 

Vol. 12, Issue 5, May 2025

DOI: 10.17148/IARJSET.2025.125225

# FREIGHT FORWARDING OPERATIONS: AN IN-DEPTH ANALYSIS OF WORK ACTIVITIES AND CHALLENGES

## Mr. KOUSHIK SHARAN P1, Dr. D ANITHA KUMARI\*2

II MBA Shipping & Logistics Management, Department of Management Studies, VISTAS<sup>1</sup>

Associate Professor and Programme Coordinator, MBA Shipping & Logistics Management, Vels Institute of Science

Technology and Advanced Studies (VISTAS) Pallavaram, Chennai-117<sup>2</sup>

'Corresponding Author

**ABSTRACT:** This paper provides an overview of the freight forwarding industry, highlighting its critical role in facilitating the global movement of goods through strategic logistics coordination across various transport modes air, sea, rail, and road. Freight forwarders act as intermediaries between shippers and consignees, managing the complex shipping process through a reliable network of third parties, including carriers, insurers, and customs agents. While these companies contribute significantly to international trade by simplifying cross-border logistics, they face a range of challenges. These include regulatory compliance, technological adaptation, economic fluctuations, intense competition, infrastructure limitations, environmental disruptions, insurance liabilities, payment issues, quality control demands, and cultural differences. The paper outlines how these factors influence the efficiency and profitability of freight forwarding businesses, emphasizing the need for adaptability, robust planning, and continuous investment in technology and human resources to navigate an increasingly complex global trade environment.

Keywords: Freight forwarding; Global logistics; Multimodal transport; Supply chain; Regulatory compliance; Technology; Trade challenges; Risk management

#### I. INTRODUCTION

A freight forwarder is a company or individual responsible for managing the logistics of transporting goods from one location to another using various carriers such as air, sea, rail, or road. Acting as intermediaries between shippers and consignees, freight forwarders handle key tasks including rate negotiations, vessel scheduling, customs clearance, and freight consolidation to ensure the timely and safe delivery of goods. However, the freight forwarding industry faces numerous challenges. Regulatory compliance with customs, safety, and environmental standards is often complex and time-consuming. Technological advancements demand ongoing investment in digital infrastructure and training. Economic volatility, including fluctuating currency rates, changing trade regulations, and shifting consumer demand, can affect profitability. The industry also grapples with intense competition, inefficient transportation infrastructure, and environmental disruptions such as weather events and natural disasters. Additionally, freight forwarders must manage risks related to insurance, liability, delayed or unpaid foreign payments, and maintain quality control to protect their reputation. Cultural differences in global trade further complicate communication and operational efficiency, making adaptability a critical success factor.

#### STATEMENT OF PROBLEM

Freight forwarders play a key role in the global supply chain, yet their work activities are often under-documented and misunderstood. The industry faces challenges from complex international regulations, changing trade policies, and compliance requirements. Gaps in digital infrastructure and IT disruptions hinder logistics efficiency, while external factors like customs delays, weather, port congestion, and geopolitical tensions cause unpredictable risks. Poor coordination and communication among stakeholders lead to errors and delays.

Rising operational costs and competitive pressures further strain profitability. Additionally, limited awareness of these challenges results in inadequate support from clients, partners, and policymakers.

#### NEED FOR THE STUDY

This study focuses on identifying challenges and inefficiencies in the freight forwarding industry to improve operational performance. By analyzing bottlenecks, skill gaps, and areas for innovation, the research aims to enhance service quality,

### **IARJSET**



# International Advanced Research Journal in Science, Engineering and Technology Impact Factor 8.066 Refereed journal Vol. 12, Issue 5, May 2025

DOI: 10.17148/IARJSET.2025.125225

reduce costs, and improve risk management. The findings will also help logistics professionals adapt to trends like digital platforms, automation, and sustainable practices, providing valuable insights for companies, policymakers, and aspiring professionals in the industry.

#### SCOPE OF THE STUDY

This study examines the core activities and responsibilities of freight forwarders within the logistics sector, including documentation, cargo handling, customs clearance, and coordination with carriers. It explores the use of technology, common operational challenges, and the impact of external factors such as geopolitical tensions and pandemics. The study also evaluates interactions with key stakeholders, identifies industry trends, and highlights the skills needed to adapt to evolving market and technological demands.

#### II. REVIEW OF LITERATURE

Parimala Gopinath (2020) examined challenges faced by freight forwarders in Tamil Nadu, focusing on regulatory issues, infrastructure limitations, and the need for technological adoption.

Banaja Mishra (2024) highlighted the fragmented nature of the Indian freight forwarding sector, stressing the importance of standardization and technology integration.

Deepa Rajesh and Sandeep Kumar Gupta (2023) analyzed operational inefficiencies, regulatory hurdles, and market dynamics affecting the performance and competitiveness of freight forwarders.

Berrada and Ciro (2009) examined the bottlenecks in the freight forwarding sector in West Coast Africa. The study highlights that freight forwarders rely on shared services and external factors beyond their control, limiting their efficiency. It concludes that inadequate infrastructure is the primary bottleneck in the sector.

Michael Brown (2021) Michael's study has analysed the multifaceted challenges faced by freight forwarders and carriers, with a focus on emerging issues in the global transportation industry.

Dhanabakyam and Parimala (2006) explored the role of freight forwarders and customs house agents in international logistics. The study emphasizes the growing importance of freight forwarding in global trade and highlights the need for service providers to expand their networks and enhance service accuracy to meet future challenges.

Ahmed and Rahman (2023) investigated the challenges faced by freight forwarders in the Chennai region. Their study identifies key issues in documentation, customs clearance, operations, and stakeholder communication, all of which negatively impact the efficiency and competitiveness of the industry.

Mith, Patel, and Garcia (2023) presented a comprehensive analysis of the challenges that confronted freight forwarders and carriers in the contemporary logistics landscape. Drawing on industry reports, academic literature, and expert insights, the study highlighted the complex and multifaceted obstacles faced by stakeholders in the freight transportation sector.

Rodrigue (2020) explored the evolving role of freight forwarding within complex global supply chains. He discussed the growing need for supply chain integration, the significance of multimodal logistics, and the impact of technological advancements such as digital tracking and smart documentation on operations. The book also addressed key challenges including port congestion, environmental regulations, and geopolitical trade shifts.

#### **OBJECTIVES OF THE STUDY**

#### Primary:

To explore and analyses the core work activities and operational challenges faced by freight forwarders in the modern logistics industry.

#### Secondary:

- To know the work activities of freight forwarders.
- To know the various services that can be performed by a freight forwarder.
- To understand the different problems and challenges faced by freight forwarder.
- To find ways to improve efficiency of the freight forwarding services

#### III. RESEARCH METHODOLOGY

The research methodology adopted in this study involves a systematic and scientific approach to investigate and resolve the research problem, specifically aiming to enhance the effectiveness of logistics and supply chain processes. It includes the careful selection of appropriate methods for data collection, analysis, and interpretation to ensure the logical progression of the study. A descriptive research design is employed, which systematically describes the responses of the population without manipulation of variables. This design is suitable for real-world data and is known for its accuracy and validity. Data is collected through a structured questionnaire distributed to the target population, and the responses are analyzed accordingly.



# International Advanced Research Journal in Science, Engineering and Technology Impact Factor 8.066 Refereed journal Vol. 12, Issue 5, May 2025

DOI: 10.17148/IARJSET.2025.125225

The sampling technique used in this study is non-probability sampling, where participants are chosen based on their direct involvement and experience in freight forwarding operations. This ensures that the information gathered is from individuals who are knowledgeable and relevant to the research topic. The geographical focus of the study is primarily on the Chennai region. A total of 30 respondents have been selected as the sample size. The questionnaire was shared with them via Google Forms, and their responses have been recorded for analysis.

#### DATA COLLECTION METHODS

#### Primary data:

Primary data was collected through the use of structured questionnaires and semi structured interviews. These tools were administered to a selected group of freight forwarders operating within Chennai. The questionnaires were designed to capture both quantitative and qualitative information related to their daily work activities, operational procedures, and the challenges they encounter. The semi-structured interviews provided more in-depth insights and allowed respondents to elaborate on specific issues affecting their operations.

#### Secondary Data:

Secondary data was obtained from industry reports, academic journals, company websites, and government publications relevant to logistics and freight forwarding. This helped in contextualizing the primary data and identifying existing literature and trends concerning freight forwarders' work environments and the challenges they face globally and locally.

# DATA ANALYSIS AND INTERPRETATION Descriptive statistics

#### **Descriptive Statistics**

|  | N  | Mean | Std. Deviation |
|--|----|------|----------------|
| Which type of freight forwarding service do you predominantly manage?                | 30 | 1.60 | 1.003          |
| What is the most frequent operational delay you encounter during freight forwarding? | 30 | 1.90 | .803           |
| How significant is client pressure in altering your operational processes?           | 30 | 1.47 | .571           |
| Valid N  | 30 |      |                |

#### INTERPRETATION

The descriptive statistics reveal key insights into freight forwarding operations. A mean score of 1.60 for the type of freight service suggests a primary focus on either air or sea freight, with some variation among respondents. Operational delays, averaging 1.90, appear to be a common issue likely related to customs clearance or documentation supported by a low standard deviation indicating consistency in this experience.

The client pressure score, with a mean of 1.47 and minimal variability, implies that freight forwarders generally experience low to moderate client influence, suggesting a reasonable level of operational autonomy.

#### **Chi-Square Test**

Comparing the two variables is primary technology/tool used for daily operations and most frequent operational delay encountered during freight forwarding.

#### Chi-Square Tests

|                              |                     |    | Asymptotic Significance |
|------------------------------|---------------------|----|-------------------------|
|                              | Value               | df | (2-sided)               |
| Pearson Chi-Square           | 15.343 <sup>a</sup> | 9  | .082                    |
| Likelihood Ratio             | 15.559              | 9  | .077                    |
| Linear-by-Linear Association | .723                | 1  | .395                    |
| N of Valid Cases             | 30                  |    |                         |



## International Advanced Research Journal in Science, Engineering and Technology Impact Factor 8.066 Refereed journal Vol. 12, Issue 5, May 2025

DOI: 10.17148/IARJSET.2025.125225

Chi-Square Tests

|                              |         |    | Asymptotic<br>Significance (2- |
|------------------------------|---------|----|--------------------------------|
|                              | Value   | df | sided)                         |
| Pearson Chi-Square           | 15.583a | 6  | .016                           |
| Likelihood Ratio             | 8.120   | 6  | .229                           |
| Linear-by-Linear Association | .944    | 1  | .331                           |
| N of Valid Cases             | 30      |    |                                |

#### INTERPRETATION

Here, based on this test, it can be concluded there is no significant relationship between the primary technology/tool used and the type of operational delay most frequently encountered during freight forwarding.

Comparing the two variables is most frequent operational delay you encounter during freight forwarding and client pressure in altering operational processes

#### INTERPRETATION

Here, based on this test, it can be concluded there is no significant relationship between the types of operational delays in freight forwarding and the perceived significance of client pressure on operational processe

#### 1. CORRELATIONS

What are the primary technology/tool do you depend on for daily operations? \* What is the most frequent operational delay you encounter during freight forwarding? Crosstabulation

|                      |                     | What is the most frequent operational delay you |             |            |            |       |
|----------------------|---------------------|---|-------------|------------|------------|-------|
|                      |                     | encounter during freight forwarding?  B)  D)    |             |            |            |       |
|                      |                     | A)  | Incorrect/I |            | Vehicle/Eq |       |
|                      |                     | Customs   | nadequate   | C) Port or | uipment    |       |
|                      |                     | Inspection                                      | Documenta   | Terminal   | Breakdown  |       |
|                      |                     | Delays  | tion        | Congestion | S          | Total |
| What are the primary | A) Freight          | 4   | 2           | 0          | 2          | 8     |
| technology/tool do   | Management          |   |             |            |            |       |
| you depend on for    | Software (FMS)      |   |             |            |            |       |
| daily operations?    | B) Enterprise       | 1   | 5           | 2          | 0          | 8     |
|                      | Resource Planning   |   |             |            |            |       |
|                      | (ERP) Systems       |   |             |            |            |       |
|                      | C) Customer         | 4   | 9           | 0          | 0          | 13    |
|                      | Relationship        |   |             |            |            |       |
|                      | Management (CRM)    |   |             |            |            |       |
|                      | Tools               |   |             |            |            |       |
|                      | D) Manual Processes | 0   | 1           | 0          | 0          | 1     |
| Total                |                     | 9   | 17          | 2          | 2          | 30    |

#### Symmetric Measures

|   | Value | Asymptotic<br>Standard Error <sup>a</sup> | Approximate T <sup>b</sup> | Approximate Significance |
|---|-------|---|----------------------------|--------------------------|
| Interval by Interval Pearson's R        | 158   | .198                                      | 846                        | .405°                    |
| Ordinal by Ordinal Spearman Correlation | 047   | .208                                      | 251                        | .804°                    |
| N of Valid Cases                        | 30    |   |                            |                          |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

## **IARJSET**

ISSN (O) 2393-8021, ISSN (P) 2394-1588



# International Advanced Research Journal in Science, Engineering and Technology

DOI: 10.17148/IARJSET.2025.125225

#### INTERPRETATION

The most frequent operational delay in freight forwarding is Incorrect/Inadequate Documentation, reported by 17 of 30 respondents, especially among CRM tool users (9 out of 13). FMS users mainly face Customs Delays and Equipment Breakdowns, while ERP users report a mix of issues, with documentation still being the most common. Manual processes are rare but also linked to documentation delays. Overall, documentation remains the key challenge, particularly for those using less integrated systems like CRM.

#### IV. FINDINGS

The majority of respondents were male (70%) and aged 20–30 (73.3%). Most handle Full Container Load (FCL) shipments (66.7%) and find documentation manageable with proper systems (73.3%), though 56.7% cite incorrect or inadequate documentation as a key delay factor. Common issues include misclassification of goods (50%) and incorrect HS codes (53.3%). While 53.3% rate the logistics network as reliable, 56.7% report high client pressure to alter processes. Preferred enhancements include pre-clearance and real-time tracking (36.7% each). Poor packaging is a leading cause of damage (50%), and cost control is often achieved through long-term carrier contracts (60%). Key challenges include permit acquisition (43.3%), skill gaps in technical shipping knowledge (55.2%), and growing global trade restrictions (43.3%).

#### V. SUGGESTIONS

To enhance freight forwarding efficiency, frequent documentation errors such as incorrect HS codes and incomplete invoices must be addressed to avoid customs delays and penalties. Continuous training programs should be implemented to align with evolving Indian regulations and international practices. Real-time data access and automation are essential for transparency and timely decision-making. Proactive risk planning, including alternate routing and supplier diversification, is advised. Adoption of digital documentation tools and regular internal audits can mitigate legal and operational risks. Integrating CRM, ERP, and FMS systems will streamline operations and minimize logistical errors. Additionally, stakeholder education on customs procedures and the formation of a dedicated compliance team, supported by classification software, can significantly reduce clearance delays.

#### VI. CONCLUSION

This study underscores the complex nature of freight forwarding, which requires a blend of technical expertise, regulatory knowledge, and strong operational skills. Key challenges arise from both external factors such as shifting global policies, customs delays, and inconsistent documentation and internal issues like insufficient training and communication gaps. Despite these obstacles, the industry's shift toward digitalization, automation, and strategic collaboration presents significant opportunities for improvement. Realizing these benefits, however, hinges on a commitment to innovation and workforce development. As a critical component of the global supply chain, addressing the core challenges in freight forwarding will enhance service quality, compliance, and adaptability. The findings offer a foundation for further research and practical strategies to strengthen the sector's resilience and efficiency.

#### REFERENCES

- [1]. Brown, M. (2021). Challenges Faced by Freight Forwarders and Carriers in Global Transportation.
- [2]. Crainic, T. G., Perboli, G., & Rosano, M. (2018). Strategies for Managing Disruptions in Freight Forwarding: Dynamic Re-Routing and Supply Chain Redundancy.
- [3]. Morrison, M., & Hennessey, S. (2023). Trade Wars and Geopolitical Instability: Implications for Freight Forwarding.
- [4]. **Zhang, Y., & Liu, J.** (2021). Impact of E-Commerce on Freight Forwarding: Last-Mile Delivery Challenges and Solutions.
- [5]. <a href="https://www.researchgate.net/publication/341592085">https://www.researchgate.net/publication/341592085</a> Freight forwarder's hurdles in the international business environment\_With\_Special\_Reference\_to\_Tamil\_Nadu
- [6]. <a href="https://www.csrlsc.com/the-freight-forwarding-industry-in-india-strengths-weaknesses-and-the-need-for-standardization/">https://www.csrlsc.com/the-freight-forwarding-industry-in-india-strengths-weaknesses-and-the-need-for-standardization/</a>
- [7]. https://www.researchgate.net/publication/372304014\_AN\_ASSESSMENT\_OF\_CHALLENGES\_AND\_FACTOR\_INFLUENCING\_THE\_FREIGHT\_FORWARDING\_BUSINESS\_IN\_THE\_LOGISTICS\_INDUSTRY
- [8]. <a href="https://www.researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Logistics\_and\_SCM\_Researchgate.net/publication/235317718\_An\_Inventory\_of\_Theory\_in\_Inventory\_of\_Theory\_in\_Inventory\_of\_Theory\_in\_Inventory\_of\_Theory\_in\_Inventory\_of\_Theory\_in\_Inventory\_of\_Theory\_in\_Inventory\_of\_T