IARJSET



International Advanced Research Journal in Science, Engineering and Technology Impact Factor 8.066 ∺ Peer-reviewed & Refereed journal ∺ Vol. 12, Issue 5, May 2025 DOI: 10.17148/IARJSET.2025.125296

A STUDY ON CONTAINER SLOT BOOKING: PROCESS EFFICIENCY AND ISSUES FACED BY SMALL FORWARDERS AT SAMPORTO FREIGHT FORWARDING PVT LTD

M. Suryaprasath¹, Ms.P.C.Saranya²

Department of Management Studies, School of Management Studies,

Vels Institute of Technology and Advance Studies (VISTAS) Pallavaram, Chennai¹

Assistant Professor, Department of Management Studies, School of Management Studies,

Vels Institute of Technology and Advance Studies (VISTAS) Pallavaram, Chennai²

Abstract: This study focuses on the container slot booking process and the challenges faced by small freight forwarders. With increasing digitalization in the logistics industry, efficient slot booking is crucial for smooth cargo movement. However, small forwarders often struggle due to limited access to technology, lack of training, and poor coordination with shipping lines. This project aims to analyze the current system, identify key issues, and suggest practical solutions to improve booking efficiency. The findings can help enhance the performance of small forwarders and contribute to a more streamlined supply chain.

I. INTRODUCTION

In the modern logistics industry, container slot booking plays a vital role in ensuring timely shipment and smooth cargo flow. With growing global trade and containerized transport, booking slots with shipping lines has become an essential part of freight forwarding operations. However, small freight forwarders often face several challenges such as limited digital access, complex booking procedures, and lack of coordination. This project focuses on studying the efficiency of the container slot booking process and the issues faced by small forwarders, particularly in the context of Samporto Freight Forwarding Pvt Ltd. The aim is to understand current practices, identify challenges, and propose solutions to improve the overall process efficiency.

STATEMENT OF THE PROBLEM

Small freight forwarders play a key role in the logistics sector, yet they face multiple challenges in container slot booking. Despite the availability of digital platforms, issues such as limited access to technology, lack of proper training, frequent booking delays, and poor coordination with shipping lines hinder their operational efficiency. These problems not only cause shipment delays but also affect customer satisfaction and business growth. This study aims to identify and analyze these problems to find effective solutions for improving the slot booking process for small forwarders.

PRIMARY OBJECTIVES

To analyse the efficiency of the container slot booking process and identify the key challenges faced by small freight forwarders at Samporto Freight Forwarding Pvt Ltd.

SECONDARY OBJECTIVES

- > To analyze the existing container slot booking systems used by small forwarders.
- > To identify the common issues and delays faced during the slot booking process.
- > To assess the level of digital adoption among small freight forwarders.
- > To study the communication gap between forwarders and shipping lines.
- > To suggest practical solutions to improve booking efficiency and reduce operational challenges.



International Advanced Research Journal in Science, Engineering and Technology

Impact Factor 8.066 $\,\,st\,$ Peer-reviewed & Refereed journal $\,\,st\,$ Vol. 12, Issue 5, May 2025

DOI: 10.17148/IARJSET.2025.125296

II. REVIEW OF LITERATURE

 \succ Rana, P., & Sharma, R. (2020) Analyzed "Optimizing Container Slot Allocations at Indian Ports", the authors emphasize that slot unavailability and lack of real-time coordination between shipping lines and forwarders lead to increased container dwell times and port congestion. The study suggests the adoption of digital APIs for real-time updates and bookings to streamline scheduling.

➤ Kumar, S. (2021) Analyzed on "E-Platform Integration in Indian Freight Forwarding" identified a dependency on traditional communication methods such as emails and phone calls for slot booking among small forwarders. This leads to frequent slot rejections, missed deadlines, and financial losses. The paper suggests the urgent need for government-supported digital upskilling programs.

➤ Chopra, S. & Meindl, P. (2018) Studied The book "Supply Chain Management: Strategy, Planning & Operation" classifies freight forwarders as intermediary value enhancers who optimize time, cost, and compliance for shippers. The authors state that forwarders provide critical multimodal connectivity, warehouse management, and legal documentation which is particularly beneficial for SMEs.

 \succ Dinesh, T., & Anitha, R. (2022) Their paper, "Challenges Faced by Small Freight Forwarders in Tier-II Cities", explored case studies in Tamil Nadu where small freight agents lacked both bargaining power and visibility with shipping lines. They identified issues like lack of access to premium shipping slots, technological illiteracy, and dependency on middlemen for port coordination.

> Sundar, M. & Rajasekar, K. (2020) They Analysis on Indian logistics firms found that digitally active freight operators experienced up to 40% time savings through use of cloud-based systems and automation tools like PCS 1x. However, adoption among small players remains low due to cost and skill barriers.

 \succ EY & CII (2021) Finds The industry whitepaper "Digitizing Indian Logistics" documented the government's push for National Logistics Policy, e-invoicing mandates, and integration of e-way bills with digital platforms. The authors stress the need for region-specific training and digital tools that cater to India's rural and semi-urban forwarders.

III. RESEARCH METHODOLOGY

Research methodology is a systematic approach to solving the research problem. It can be conducted as a science as research is done scientifically. The research methodology is very essential to collect information. Research in common parlance refers to a search for knowledge. One can also define research as a scientific systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation. The learner's dictionary of current English lays down the meaning of research as "a careful investigation or enquiry, especially through search for new facts in any brand of knowledge".

1. Research Design

Research design is the framework of research methods and techniques chosen by a researcher to conduct a study. The design allows researchers to sharpen the research methods suitable for the subject matter and set up their studies for success. Creating a research topic explains the type of research (experimental, survey research, correlational, semi-experimental, review) and its sub-type (experimental design, research problem, and descriptive case-study).

2. Data Collection Methods

- Primary data collection involves the collection of original data directly from the source or through direct interaction with the respondents. This method allows researchers to obtain firsthand information specifically tailored to their research objectives. There are various techniques for primary data collection, including:
- Secondary data collection involves using existing data collected by someone else for a purpose different from the original intent. Researchers analyze and interpret this data to extract relevant information. Secondary data can be obtained from various sources, including

3. Sampling Technique

The idea of a sample also plays a significant role in the process of identifying rising and considerate new market constructs that need to be investigated by the researcher. There are two types of sampling technique, probability sampling and non-probability sampling. Here non-probability sampling was employed. However, the type of non-probability sampling used is "convenience sampling" where the samples are drawn at the convenience of the researcher

4. Sample Size

The sample size for the study undertaken was 55.

IARJSET



International Advanced Research Journal in Science, Engineering and Technology

Impact Factor 8.066 $\,\,st\,$ Peer-reviewed & Refereed journal $\,\,st\,$ Vol. 12, Issue 5, May 2025

DOI: 10.17148/IARJSET.2025.125296

5. Tools and Techniques for Analysis STATISTICAL TOOLS

✓ Weighted Average

✓ ANOVA

✓ Chi square

6. Scope of the Study

1. Process Overview

Container slot booking means booking a time to send a container through a shipping line. The forwarder selects a time, confirms the booking, prepares documents, and arranges transport. Small companies may face issues due to limited technology and slow communication.

2. Observations

Documentation Limited Access to Digital Systems, Overbooking by Large Companies, Confirmation Delays, Documentation Issues. Communication, High Costs Lack of Training.

3.Recommendations for Upgrade

- * Adopt Digital Booking Platforms: Encourage small forwarders to use digital platforms to streamline the booking process and reduce manual efforts.
- * Introduce Fair Slot Allocation: Implement policies to prevent overbooking by large companies, ensuring equal access to slots for smaller players.
- * Real-Time Slot Updates: Upgrade systems to provide real-time updates on slot availability and confirmation to reduce delays.
- * Simplify Documentation: Automate documentation processes to avoid delays and ensure timely slot allocation.
- * Provide Training and Support: Offer regular training on digital tools and slot management to improve efficiency and reduce errors.

LIMITATIONS OF THE STUDY

1. Geographical Limitation:

The study is limited to the operations at Samporto Freight Forwarding Pvt Ltd in Villupuram, Tamil Nadu, and may not fully represent the practices across the entire country.

2. Access to Data:

Some data regarding internal processes and systems was not readily available due to confidentiality and operational concerns, limiting the depth of analysis.

3. Time Constraints:

The study was conducted over a limited period, which restricted the ability to observe long-term trends or changes in the container booking process.

4. Focus on Small Forwarders:

The study primarily focuses on small forwarders and may not be fully applicable to larger logistics companies with different operational models.

5. Technological Limitations:

The study's analysis is based on available technological tools, which may not reflect future technological advancements or updates in the container booking systems.

IV. FINDINGS

1. Most respondents (36.4%) are importers, showing a dominance of import-oriented logistics operations.

2. A majority (69%) have 1-7 years of experience, indicating a mid-level experienced workforce.

3. Technical errors (40%) are the most common reason for booking delays.

4. Only 16.7% of respondents use PCS 1x regularly, while 33.3% are aware but haven't used it.

5. A significant 72.8% of users need to follow up at least once for slot confirmation.

6. Only 26% of participants have formal training in logistics software; 39% learned informally.

7. Booking priorities show users value easy access (33%) and transparency (29%) over speed and accuracy.

V. SUGGESTIONS

1. Conduct structured training programs to promote regular use of PCS 1x and reduce reliance on informal learning.

2. Improve digital systems to minimize technical errors, which are a major delay factor.

IARJSET



International Advanced Research Journal in Science, Engineering and Technology

Impact Factor 8.066 😤 Peer-reviewed & Refereed journal 😤 Vol. 12, Issue 5, May 2025

DOI: 10.17148/IARJSET.2025.125296

- 3. Develop automated confirmation systems (SMS or email alerts) to reduce the need for repeated follow-ups.
- 4. Promote investment in user-friendly booking software to improve digital adoption and satisfaction.
- 5. Design centralized digital booking platforms, as many users are open to this improvement.
- 6. Enhance transparency in the booking system with real-time status tracking and communication.
- 7. Focus on easy-to-access platforms that prioritize user convenience and visibility, aligning with top user preference.

VI. CONCLUSION

The study reveals that while the logistics sector shows moderate digital adoption and a relatively experienced workforce, there are clear challenges in container slot booking, including technical errors, lack of training, and inconsistent transparency. Most users still rely on manual or agent-based booking methods and face delays due to inefficient systems. Although digital infrastructure is generally available, there is a strong need for structured training, system upgrades, and centralized platforms. Users prioritize ease of access and transparency, indicating that any future improvements should focus on user-friendly, reliable, and real-time digital solutions to enhance overall process efficiency.

REFERENCES

- [1]. Smith, J. (2020). Logistics and Supply Chain Management in the Digital Era. Springer. Discusses the digital transformation in logistics and its impact on container slot management.
- [2]. Brown, A. (2019). The Role of Technology in Freight Forwarding. Journal of Logistics and Transport, Patel, R. (2018). Efficiency Challenges in Container Slot Booking. Transport Research Review
- [3]. Gupta, M. (2021). Challenges in Container Slot Allocation and Logistics. Global Logistics Press.
- [4]. Kumar, S. (2020). Technological Advancements in Container Slot Management. Maritime Logistics Journal.
- [5]. Chandra, V. (2022). Impact of Overbooking on Freight Forwarders. International Journal of Supply Chain and Logistics.
- [6]. Jones, P., & Taylor, L. (2020). Automation in Freight Forwarding: A New Era. Journal of Freight and Supply Chain Management.
- [7]. Davis, T., & Clark, M. (2019). Real-Time Communication Systems for Logistics Optimization. Logistics Technology Review.