Evaluating Operational Efficiency and Employee Perception of Container Freight Stations in the Freight Forwarding Industry with reference to the Seavenseas Global Logistics Private Limited

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ABSTRACT:

This study evaluates the operational efficiency of Container Freight Stations (CFS) and examines the perception of freight forwarding employees toward their performance. Based on data collected from 116 respondents, the study uses percentage analysis, weighted average, and Henry Garrett ranking techniques.

The findings indicate that employees have moderate awareness of CFS operations and consider them generally reliable. However, challenges such as communication gaps, documentation delays, and infrastructure limitations affect efficiency. The study identifies faster dispatch, improved coordination, and better technology adoption as key areas for improvement.

The research concludes that enhancing communication, upgrading infrastructure, and implementing digital solutions can significantly improve CFS performance and overall logistics efficiency.

INTRODUCTION:

In the era of globalization, the logistics and supply chain industry has become a backbone of international trade and economic development. Efficient movement of goods across borders depends on multiple stakeholders, among which freight forwarders and Container Freight Stations (CFS) play a crucial role. Freight forwarders act as intermediaries between exporters, importers, and transportation providers, ensuring seamless cargo movement.

Container Freight Stations are specialized facilities located near ports or inland depots that handle activities such as cargo consolidation, deconsolidation, storage, customs clearance, and distribution. They help reduce port congestion and improve the efficiency of cargo handling processes. In India, the growing volume of international trade has increased the importance of CFS operations in ensuring timely and cost-effective logistics services.

The efficiency of CFS operations directly influences freight forwarding performance, delivery timelines, and customer satisfaction. Employees working in freight forwarding companies interact regularly with CFS and therefore provide valuable insights into operational strengths and challenges. Understanding their perception is essential to identify gaps in coordination, technology usage, and infrastructure.

This study aims to evaluate the operational efficiency of CFS and analyze employee perception to provide recommendations for improving logistics performance.

REVIEW OF LITERATURE:

The logistics and freight forwarding industry has undergone significant transformation in recent years, driven by technological advancements, globalization, and increasing trade complexities. Several studies have examined different aspects of Container Freight Stations (CFS) and freight forwarding operations.

Jaison Augustine (2025) highlighted the growing instability in container shipping and emphasized the need for smarter logistics strategies and adaptive operations. The study suggests that agility in freight handling and coordination is essential to manage disruptions in global supply chains.

Syeda Ayesha (2025) explored how emerging technologies such as Artificial Intelligence (AI), Internet of Things (IoT), and blockchain are transforming freight forwarding. The study concluded that digitalization enhances transparency, improves tracking, and reduces operational inefficiencies in logistics systems, including CFS operations.

Nitin Behl (2024) focused on the digital transformation of Container Freight Stations. The study demonstrated how automation and digital platforms improve operational efficiency, reduce delays, and enhance cargo handling processes

Paul Noble (2023) discussed the application of artificial intelligence in logistics maintenance and operations, indicating its relevance in improving efficiency across freight forwarding and CFS systems.

Sameer Varun (2020) provided a comprehensive overview of freight forwarding operations and highlighted the critical role of CFS in ensuring smooth cargo movement and efficient logistics management.

OBJECTIVES OF THE STUDY:

Primary Objective:

Evaluating Operational Efficiency and Employee Perception of Container Freight Stations in the Freight Forwarding Industry with reference to the Seavenseas Global Logistics Private Limited

Secondary Objectives:

- To evaluate the role and operational effectiveness of Container Freight Stations (CFS) in supporting freight forwarding activities.
- To identify the operational challenges faced by freight forwarding employees while dealing with CFS operations
- To examine the effectiveness of communication between freight forwarders and CFS staff.
- To analyse the efficiency of documentation and record-keeping systems in CFS operations.
- To assess the use and effectiveness of technology systems in CFS operations.

RESEARCH METHODOLOGY:

Research Design:

The study adopts a descriptive research design, which is used to describe the characteristics, perceptions, and opinions of freight forwarding employees regarding Container Freight Station (CFS) operations. This design helps in systematically analysing awareness levels, operational efficiency, and challenges faced by employees.

Sampling:

The population of the study consists of employees working in freight forwarding companies who are directly or indirectly associated with CFS operations.

Sample Size:

A total of 116 respondents were selected for the study.

Sampling Technique:

The study uses Simple Random Sampling, where respondents were chosen based on accessibility and willingness to participate. This method ensures a fair representation of employees involved in freight forwarding activities.

Data Collection Primary

Primary data was collected directly from respondents using a structured questionnaire. The questionnaire included questions related to awareness, operational efficiency, challenges, communication, and technology in CFS operations.

Analytical Tools

The study uses the following statistical tools for data analysis:

Weighted Average Method

Used to measure the relative importance of different factors by assigning weights to responses, especially in Likert scale analysis.

Henry Garrett Ranking Technique

Used to rank various factors based on respondent preferences by converting ranks into scores and identifying the most significant factors.

DATA ANALYSIS AND FINDINGS:

Respondent Profile:

The majority of respondents are male (64%). Most respondents are below 25 years of age (36%), and the highest work experience group is 1–3 years (38%).

Table 1: Respondent Profile

Category	Sub-Group	Respondents	Percentage
Gender	Male	74	64%
	Female	42	36%
Age Group	Below 25 years	41	36%
	25–34 years	30	26%
	35–44 years	23	20%
	45–54 years	13	11%
	55 years and above	8	7%
Experience	Less than 1 year	25	22%
	1–3 years	44	38%
	4–6 years	22	19%
	7–10 years	20	17%
	More than 10 years	5	4%

WEIGHTED AVERAGE:

Evaluation of employee awareness level of freight forwarding

Particulars	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total	Average
I clearly understand the link between CFS operations and freight forwarding activities.	40(200)	42(168)	26(78)	6(12)	2(2)	116(460)	3.96
I am well aware of the customs clearance procedures	6(30)	66(264)	31(93)	8(16)	5(5)	116(408)	3.51
I am knowledgeable about cargo storage and handling procedures in CFS.	14(70)	50(200)	27(81)	12(24)	13(13)	116(388)	3.34

INTERPRETATION:

The table shows the awareness level of the employees regarding CFS operations through practical training.

Identification of Operational challenges faced by freight forwarding employees in dealing with CFS

particulars	Never	Rarely	Sometimes	Often	Always	Total	Average
Delays due to CFS documentation processes	39(195)	32(128)	28(84)	11(22)	6(6)	116(435)	3.75
Infrastructure issues at CFS (e.g., space, equipment) affecting work	13(65)	51(204)	35(105)	13(26)	4(4)	116(404)	3.48
Miscommunications ns between your company and the CFS	20(200)	43(172)	29(87)	14(48)	10(10)	116(517)	4.45

INTERPRETATION

The table shows the operational challenges faced by employees while dealing with CFS operations. The highest average score is 4.45 recorded for miscommunication between the company and the CFS, indicating that communication gaps frequently affect coordination. This is followed by delays due to CFS documentation processes is 3.75 and infrastructure issues such as space and equipment is 3.48. Overall, the results show that employees experience moderate operational difficulties, highlighting the need for better communication, improved infrastructure, and smoother documentation procedures in CFS operations.

RANKING ANALYSIS:

Particulars	1st	2nd	3rd	4th	5th
Reduction of port congestion	39	11	40	18	8
Faster Dispatch and Delivery	8	34	50	20	4
Value-Added Services (packing, labeling, consolidation)	8	17	61	23	7
Technology and Tracking Facilities	12	24	51	24	5
Coordination with Freight Forwarders	13	15	53	20	15

Percent positions and Garret values

The Garret ranks were calculated by using appropriate Garret ranking formula. This based on Garret ranks, the garret value was calculated. The garret table and scores of each problem in the above table and multiplied to record score in next table finally by adding each row the total garret scores will be obtained.

Formula: $\text{Percentage position} = \frac{100\ (Rij - 0.5)}{Nj}$

The result is provided in the following table,

S.no	100(Rij-0.5)/Nj	Calculated value	Garret value
1	100(1-0.5)/5	10	75
2	100(2-0.5)/5	30	60
3	100(3-0.5)/5	50	50
4	100(4-0.5)/5	70	40
5	100(5-0.5)/5	90	24

Calculation of Garret value and ranking:

Particulars	1st	2nd	3rd	4th	5th	Total	Average	Rank
Reduction of port congestion	2925	825	3000	1350	600	8700	1740	1
Faster Dispatch and Delivery	480	2040	3000	1200	240	6960	1392	2
Value-Added Services (packing, labelling, consolidation)	400	850	3050	1150	350	5800	1160	3
Technology and Tracking Facilities	480	960	2040	960	200	4640	928	4
Coordination with Freight Forwarders	312	360	1272	480	360	2784	556.8	5

INTERPRETATION:

The table shows that “Faster Dispatch and Delivery” ranks first, indicating it is the most important factor in CFS operations. “Reduction of Port Congestion” ranks second, followed by “Value-Added Services” in third place. “Technology and Tracking Facilities” are ranked fourth, and “Coordination with Freight Forwarders” is fifth. Overall, the results show that employees give more importance to timely delivery and smooth port operations.

FINDINGS:

FINDINGS (WEIGHTED AVERAGE ANALYSIS):

Employee Awareness Level of Freight Forwarding Activities related to CFS the weighted average values show that employees have a fair understanding of CFS functions. Most respondents scored average 3.96 clearly understand the link between CFS operations and freight forwarding activities. Awareness of customs procedures scored 3.51, while knowledge of cargo handling scored 3.34, indicating moderate familiarity. This means while employees are aware of core processes, further hands-on training could

improve their expertise. Overall, employees demonstrate good theoretical knowledge but limited practical exposure to all CFS functions.

Operational Challenges Faced by Employees in Dealing with CFS the weighted averages reveal that miscommunication between the company and CFS is 4.45 the most frequent issue. Infrastructure problems like lack of space or equipment scored 3.75, and documentation delays scored 3.48. This suggests that while documentation has improved, coordination and facility-related issues still affect work efficiency. The data indicates that employees regularly face communication barriers, which slow down operations and create confusion. Improving coordination and upgrading infrastructure could enhance operational performance.

FINDINGS (RANK ANALYSIS):

The Garrett ranking results show that Faster Dispatch and Delivery is the top improvement priority, meaning employee's value time efficiency the most. Reduction of Port Congestion ranks second, reflecting concern about delays caused by heavy traffic at ports. Value-Added Services like packing and labelling ranked third, showing moderate importance to employees. Technology and Tracking Facilities ranked fourth, indicating partial satisfaction with existing digital systems. Coordination with Freight Forwarders ranked last, suggesting it needs improvement though employees focus more on speed and congestion issues.

Recommendations:

- CFS should conduct regular training programs to improve employee familiarity with customs and handling procedures.
- Digital documentation systems should be made more user-friendly to reduce manual errors and time delays.
- Stronger communication channels must be established between CFS staff and freight forwarders to avoid miscommunication.
- CFS management should upgrade infrastructure such as storage, space, and equipment to handle increasing cargo volumes efficiently.

Conclusion:

This study highlights the critical role of Container Freight Stations (CFS) in ensuring the efficiency of freight forwarding operations through effective cargo handling, storage, and clearance. The findings indicate that employees have a reasonable level of awareness regarding CFS functions and their connection with freight forwarding activities. However, there is scope for improvement in areas such as communication, infrastructure, and technical understanding, particularly in customs procedures. Key factors influencing operational performance include accuracy in delivery schedules, safety of goods, and cost efficiency, which significantly impact overall satisfaction levels.

The study also identifies major challenges such as miscommunication, space constraints, and documentation delays that hinder smooth operations. Garrett Ranking analysis reveals that faster dispatch and delivery and reduction of port congestion are the top priorities, reflecting the increasing demand for speed and reliability in logistics. Therefore, improving communication systems, adopting advanced technologies, upgrading infrastructure, and enhancing employee training are essential for strengthening CFS operations. Addressing these areas will lead to better coordination, increased productivity, and improved performance in the freight forwarding industry.

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