

“AN ANALYSIS OF CHALLENGES FACED BY FREIGHT FORWARDERS IN CHENNAI”

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ABSTRACT

The freight forwarding industry plays a vital role in facilitating international trade by coordinating the movement of cargo across borders on behalf of exporters and importers. In India, freight forwarders face significant operational, regulatory, technological, and competitive challenges that affect their efficiency, profitability, and service quality. This study titled "An Analysis of Challenges Faced by Freight Forwarders in Chennai" aims to identify and analyze the key challenges confronting freight forwarding professionals in India. The study is guided by a conceptual framework linking three variable groups — Independent Variables representing Logistics Operational Barriers, Mediating Variables representing Management Strategies, and Dependent Variables representing Business Performance outcomes.

Primary data was collected from 60 logistics and freight forwarding professionals through a structured questionnaire using a five-point Likert scale. Statistical analyses including One-Way ANOVA, Chi-Square Test, Pearson Correlation, and Simple Linear Regression were conducted using SPSS and MS Excel. The findings reveal that poor infrastructure, port congestion, customs clearance delays, rising transportation costs, skilled manpower shortage, and intense market competition are the most critical challenges. All statistical tests confirmed non-significant results, establishing that these challenges are systemic and equally experienced across all professional groups in the Indian freight forwarding sector. The study concludes with practical recommendations for freight forwarding companies, government bodies, and industry associations to improve operational efficiency and business performance.

Keywords: Freight Forwarding, Logistics Operational Barriers, Management Strategies, Business Performance, Port Congestion, Customs Clearance, Supply Chain Management, India

1. INTRODUCTION:

1.1 Definition of Freight Forwarding

The freight forwarding industry involves the Person or Business that works on behalf of Shippers/Consignees to facilitate the supply chain(s) of Goods (Cargo), Internationally between export(s) and import(s) across national borders as well as between export(s) and import(s) while also serving as the intermediary (Middle of the Road) between the Forwarders, Shippers, Consignees, Airlines, Shipping Lines, Road Haulers, Air Haulers, and Customs Officials; their role includes transporting and coordinating goods internationally, including in the most efficient and cost-efficient manner possible while providing

adequate transportation coordination for safe, timely, and legal movement (Transportation) of goods from the origin to destination(s).

Forwarders are responsible for important documentation related to the transportation of goods from one country to another, including Bills of Lading, Airway Bills, Commercial Invoices, (Packing) Lists, and Certificates of (Origin) Documentation. Further, these Forwarders work with U.S. Customs to ensure compliance with all rules and regulations associated with the movement of goods into and out of the United States, which reduces the likelihood of any sort of delay(s) or penalty(s) as it relates to international shipping. The Forwarder functions to avoid the unnecessary financial burden of a shipper or consignee by using technology that is available today via digitized systems, tracking tools, and logistics-based software to improve (both) operational efficiencies and quality of customer services

1.2 Global Freight Forwarding Market

Global Freight Forwarding is an important service that connects countries together to enable trade between nations. The various modes of transportation within the freight forwarding sector include Sea, Air, Land, Rail, and Multimodal (or combinations of two or more modes). Sea Freight is the most commonly used mode of bulk tonne delivery by container freight; air freight is primarily used to transport goods that have high value and are time-sensitive or perishable (e.g., computers, drugs, etc.). With the growth of industry, added to the increasing number of global manufacturers and rapidly growing e-commerce, the Global Freight Forwarding Market has experienced rapid growth.

Throughout the past several years, the Global Freight Forwarding Market/Industry is undergoing a major transformation driven by technological advancements. Digitized electronic documentation, real-time visibility of shipments via advanced tracking technologies, automated customs processing, advanced business intelligence/reporting tools and the use of data analytics have all increased transparency and improved productivity across the freight forwarding market. However, there are still many issues that the Global Freight Forwarding Market continues to confront, such as port congestion, fluctuating fuel prices, geopolitical issues, trade restrictions, and the recent disruptions to the freight forwarding market as a result of the global pandemic.

1.3 Objective of the study

The Primary Objective

This project seeks to identify the key problems encountered by shipping & logistics (freight forwarding) companies located in Chennai in India.

The Secondary Objectives

- Review the functions/roles of freight forwarders in the logistics sector.
- Review operational challenges that occur on a daily basis to include issues such as port congestion, delays by customs agents (banking, regulatory, etc.), and poor quality transportation infrastructure.
- Evaluate the degree to which competition and high transportation costs affect freight forwarders' success.
- Assess how freight forwarders' operational issues affect customer satisfaction and service quality.
- Assess the degree to which freight forwarding companies utilize technology when preparing and delivering freight.

1.4 Research Gap:

There is a large body of literature related to logistics and freight forwarding, but there also exist significant gaps in current knowledge. There is limited coverage of logistic issues specific to freight forwarders and there are very few studies that focus specifically on the real-time operational issues faced by freight forwarders with respect to customs delays, port congestion, transport coordination and communication, among others.

Considerably more theoretical research has been conducted on logistics than has been conducted using primary data (e.g. from employees/customers). Consequently, the reality of the operational problems faced by freight forwarders is not always fully understood, creating a significant gap in the literature. In addition, very few studies currently exist on customer satisfaction and/or quality of service specific to freight forwarders.

Lastly, technology and digital media that can be used in freight forwarding operations have received considerably less attention from researchers than other aspects of freight forwarding. Very few studies exist which are either focused on Chennai based freight forwarders with respect to their regional issues. Therefore, the goal of this research report is to identify operational issues, customer satisfaction and business performance and to provide practical recommendations for improvement in these areas.

2. REVIEW OF LITERATURE

Researchers Vasantha and Meena (2019) applied an operational perspective to look at the significant challenges affecting freight forwarders (researchers are cited correctly) identified GST policy changes, delays caused by customs and other logistical processes (like lack of coordination with ports) as impacting on (directly/indirectly) service quality and customer satisfaction; while Sharma & Rao (2021) highlighted the main regulatory challenges creating impact on the efficiency of global freight forwarding; and Kumar (2020) appointed freight forwarders to have a key role within their respective businesses assisting companies in the movement (facilitation) of freight to meet the demands of international shipping

Srinivasan (2021) also recognised that logistics challenges faced by freight forwarders are caused by poor quality of road infrastructure and lack of adequate port facilities. Improvements could be made to the logistics processes (i.e. improvements in the level of organisation and coordination of consolidation services via a third-party logistics provider) so that freight forwarders can continue to gain a competitive advantage (as cited) Singh and Prakash (2021-2022) both studied the challenges of freight forwarding in Chennai, concluding that improved planning and coordination across stakeholders will reduce operational disruptions and enhance competitive advantage; see Skiba & Karas (2021) for review of A.P. Moller Maersk as a case study on how forwarders need to change their strategy in order for them to remain competitive due to the rapid advancement in technology initiated by large shipping companies

2.1 CONCEPTUAL FRAMEWORK

The conceptual framework of this research consists of three groups of interrelated variables that represent the actual operation of Freight Forwarding in India. The framework shows the logical flow of Independent Variables to Mediated Variables and then to the Dependent Variables and how Logistics Operational Barriers influence the Management Strategy and subsequently the overall business performance.

<u>INDEPENDENT VARIABLES</u> (Logistics Operational Barriers)	<u>MEDIATING VARIABLES</u> (Management Strategies)	<u>DEPENDENT VARIABLES</u> (Business Performance)
→ INFRASTRUCTURE ISSUES	→ SUPPLY CHAIN MANAGEMENT	
→ PORT CONGESTION	→ CO ORDINATION &	→ SERVICE QUALITY
→ HIGH TRANSPORTATION COST	COMMUNICATION	→ CUSTOMER SATISFACTION
→ MARKET COMPETITION	→ TECHNOLOGY ADOPTION	

The Independent Variables: represent the Logistics Operational Barriers which have a day-to-day impact on freight forwarders in India. These barriers include inadequate infrastructure at ports, roads and terminals; port congestion resulting in delays in the shipment of goods; high transportation costs because of rising fuel prices; and significant competition among companies resulting in limited profits for freight forwarders. The combination of these different barriers forms the primary challenge environment in which freight forwarders do business.

The Mediated Variables: represent the Management Strategies used by freight forwarders to overcome the operational barriers and include: Supply Chain Management Policies and Procedures; Coordination and Communication with stakeholders such as steamship lines, customs agents and port authorities; and adopting technology through the use of digital tools, tracking systems and automated document processes. The effective use of Management Strategies is expected to result in decreasing the negative effect that Logistics Operational Barriers have on a company's business performance.

The Dependent Variables: are the Business Performance outcomes, namely Service Quality and Customer Satisfaction, representing the ultimate

3. RESEARCH METHODOLOGY:

3.1 Research Design

A descriptive research design was used for this study as its primary aim is to describe and analyze the problems experienced by freight forwarding companies in India; descriptive research is an appropriate means of identifying present problems and understanding how respondents feel about those issues as well as looking at relationships between major variables relating to freight forwarding.

3.2 Data Sources for the Study

Primary Data:

The data for the study was collected directly from 60 professionals directly involved with the logistics and freight forwarding industry through a structured questionnaire. The survey consisted of five (5) different types of respondents, which included freight forwarders, customs brokers, logistics managers, import/export managers, logistics operations personnel, business development personnel and customer service personnel. The structured questionnaire consisted of a 5-point Likert scale (Strongly Agree / Strongly Disagree) and was designed to investigate specific aspects of the logistics and freight forwarding industry including: the role of freight forwarders; operational challenges; cost considerations; methods of communication; and the level of service provided.

Secondary Data:

The secondary (backup) data that was used in this study consisted of various sources, including bookstores containing logistics and supply chain management textbooks, logistics and supply chain management-related industry publications published by FICCI, CII, KPMG and the World Bank's Logistics Performance Index, various government publications (i.e. National Logistics Policy 2022) and research articles related to the Indian freight forwarding sector, as well as several reports published by freight forwarding industry associations (i.e. FFFAI and ACAAI)

3.3 Sampling:

A convenience sampling technique was utilized due to time restrictions and simplicity of access to participants. A total of 60 participants were chosen, giving sample opportunity to enable the examination and evaluation of the information kept in connection with this academic research project.

3.4 Statistical Tools Used:

Data collected from the sample of participants will be analysed using the following statistical techniques:

One-Way ANOVA: This will be used in order to determine if there are any significant differences in the participants' perception of the problems associated with the freight forwarding process when grouped by years' experience, job title and type of freight forwarder.

Chi-Square Test: This will be used to test the association of the categorical variables (from the conceptual model) related to the infrastructure problems and the frequency of delays with customs, the operational problems and the behaviour of making recommendations, and the level of competition in the market and the behaviour of switching freight forwarders.

Pearson Correlation Coefficient: This will be used to determine how closely related linear relationships are between the three constructs of logistics operational barriers, management strategies and business performance.

Simple Linear Regression: This will be used to analyse the extent to which independent variables (conceptual model) predict the dependent variables. All statistical analyses will be conducted using SPSS software as well as MS Excel spreadsheet software

4. DATA ANALYSIS AND INTERPRETATION:

4.1 ANOVA Test Results:

The One-Way ANOVA tests had been used to identify differences in perception of groups as related to the model. The analysis indicated there were no statistically significant differences in perceptions of the Logistics Operational Barriers among participants with varying years of experience ($F = 0.309$, $p = 0.819 > 0.05$), no statistically significant differences in perception of Management Strategies among experience levels; ($F = 0.261$, $p = 0.853 > 0.05$) or no statistically significant differences in perception of Business Performance amongst differing types of service providers ($F = 0.085$, $p = 0.968 > 0.05$). Thus, null hypotheses were accepted and there was similar perception of operational barriers across all professional categories.

Hypothesis	Variable Groups Compared	F Value	p-Value	Result
H2	Years of Experience — Management Strategies	0.261	0.853	Accepted
H3	Service Type → Business Performance	0.085	0.968	Accepted

4.2 Chi-Square Test Results:

Chi-Square Test Results Chi-Square Tests were performed to assess the relationship between some of the variables included in the conceptual framework of the study through the Chi square test for independence. As a result of the analysis, there was no statistical significance found in terms of identifying a relationship between Infrastructure Issues and Frequency of Customs Delays ($\chi^2 = 18.687$, $p = 0.285 > 0.05$), Operational Challenges Affecting Satisfaction and the Ability to Recommend ($\chi^2 = 4.647$, $p = 0.326 > 0.05$), or Market Competition and the Switching of Freight Forwarders ($\chi^2 = 3.120$, $p = 0.793 > 0.05$). As a result, all null hypotheses for the study were accepted, which leads to the conclusion that no categorical and significant relationship exists among the variables on the conceptual framework.

Hypothesis	Variable Pairs	χ^2 Value	p-Value	Result
H1	Infrastructure Issues * Customs Delay Frequency	18.687	0.285	Accepted
H2	Operational Challenges * Willingness to Recommend	4.647	0.326	Accepted
H3	Market Competition * Switching Forwarders	3.120	0.793	Accepted

4.3 Pearson Correlation Results:

The linear relationships of each variable in the conceptual framework were tested using Pearson Correlation analysis. The Infrastructure Issues & Customs Delay Frequency had an r (correlation coefficient) value of -0.061 and a p-value (statistical significance) greater than 0.05 ($p=0.645$); Efficient Communication & Information Reliability had an r value of -0.109 and a p-value greater than 0.05 ($p=0.405$); and the High Transportation Cost & Customer Price Sensitivity had an r value of 0.108 and a p-value greater than 0.05 ($p=0.411$). All the correlation coefficients have values nearly equal to 0.0 with statistically insignificant p-values; indicating there are weak, if not nonexistent, linear relationships among Logistics Operational Barriers, Management Strategies, and Business Performance variables.

Hypothesis	Variable Pairs	r Value	p-Value	Result
H1	Infrastructure Issues * Customs Delay Frequency	-0.061	0.645	Accepted
H2	Efficient Communication * Information Reliability	-0.109	0.405	Accepted
H3	High Transportation Cost * Customer Price Sensitivity	0.108	0.411	Accepted

4.4 Regression Analysis Results:

The predictive relationships assessed through the conceptual framework of simple linear regression do not allow for significant predictions of: Digital Tools Adoption from Port Congestion ($R^2=0.013$; $F=0.695$; $p=0.408>0.05$); Willingness to Recommend from - Efficient Communications ($R^2=0.017$; $F=1.041$; $p=0.312>0.05$); - Customer Price Sensitivity from Market Competition ($R^2=0.003$; $F=0.162$; $p=0.689>0.05$). All regression models exhibited very low R^2 values (>0.0) and corresponding NS p-values (<0.5), indicating that the individual independent variables cannot be used independently to provide linear predictions for the dependent variables.

Hypothesis	Variable Pairs	R ² Value	F Value	p-Value	Result
H1	Port Congestion (X) → Digital Tools Adoption (Y)	0.013	0.695	0.408	Accepted
H2	Efficient Communication (X) → Recommendation (Y)	0.017	1.041	0.312	Accepted
H3	Market Competition (X) → Price Sensitivity (Y)	0.003	0.162	0.689	Accepted

5. FINDINGS, SUGGESTIONS AND CONCLUSION

5.1 FINDINGS

Demographics for Respondents: In total, most of the respondents had between one to five years of experience within the logistics and freight forward industry. Most respondents worked for a freight forward organisation followed by a logistics provider or a shipping company, which suggests that the logistics industry comprises young, expanding and skilled labour force. Most respondents worked as customer service representatives or held management positions within logistics as an employee of the logistics industry.

The Importance of Freight Forwarders in Import Logistics: The majority of respondents agreed that freight forwarders play an integral role with import operations and contribute to the overall effectiveness of supply chain management, reduce the amount of delay due to time, and reduce the overall cost of logistics for importers. As a result, freight forwarders are very important for the effective movement of imports to India.

Problems with Infrastructure: From the response data, there are substantial problems that create challenges to the efficient execution of freight forwarder's functions. Many respondents identify major problems with dense populations, port congestion and delay in delivery related to highway transport as the issues. A number of respondents noted that the substantial problems exist with regards to both port congestion and roadway connections, which make it difficult for freight forwarders to deliver freight on time and adds considerable paid work time to freight forwarders.

Challenges Associated with Delays in Customs Clearance: Customs clearance of shipments has long been a major issue for the freight forwarding industry; more than half of the participants in this study indicated that they regularly encounter delays in the overall customs clearance process. Delays of this type can negatively affect the freight forwarders' ability to meet their customers with timely delivery of cargo, thus further increasing the amount of work being placed on the freight forwarders because of the increased operational pressure placed on freight forwarders from these delays.

Competitive Environment and Transportation Cost Increases: The findings from this study confirmed that the majority of freight forwarders are operating within a predominantly competitive environment and are being adversely affected by extremely high overall costs of transporting goods. Examples of the high cost of transporting goods include increasing fuel prices and increasing carrier rates for all modes of transport.

Communication and Technology Adoption: More than 70% of survey participants indicated a positive correlation between effective ongoing communication, updates and information related to the status of their freight shipments, and improved performance within logistics. Email continues to be reported as being the most popular method used for overt communication between freight forwarders and their customers. While some freight forwarders are still limited in the level of technology they use in their companies to facilitate an efficient operation, most freight forwarders report utilizing technology to improve their operation.

Coordination and Supply Chain Management: Improved and effective communication between shipping lines, customs agents, carriers and freight forwarders would result in more effective transportation of goods. When there is a lack of efficient communication in logistics, logistics productivity is negatively affected.

Customer Gratification: Delays and inadequate services stemming from operations create a significant negative effect on the level of satisfaction received by the customer. Many customers will choose to change forwarders after experiencing service related problems; therefore, it is essential to provide high levels of service if you want to keep your customers.

ANOVA Test Result: The results of the ANOVA test indicate that there is no statistically significant difference in the responses given by the groups based on their experience level and/or characteristics of their service provider; thus all groups of respondents have encountered the same types of operating challenges within this industry.

Chi-Square Test Result: The results of the Chi-Square test show that relationships exist between the variables analyzed. Most respondents agreed that communicating and giving ongoing updates to clients about their cargo will assist them in being successful in the logistics business. E-mail was found to be the most

common method used for communication; nevertheless, there are still limitations on the extent of technology being used to improve efficiency at some forwarding companies.

Pearson Correlation Analysis: The results from the Pearson Correlation analysis show that correlations are weak between the examined variables. In fact, the results from the Pearson analysis indicate that Customs issues, Communication efficiency, Transportation costs, Price sensitivity, and Infrastructure Issues are not directly related. There is a complicated relationship between Operating Issues and Business Performance; therefore,

5.2 SUGGESTIONS

Implementing one-stop-shop customs clearance through automated documentation by the government; improve the existing road system, rail links, port infrastructure to alleviate congestion and improve the flow of cargo; investing in employee development of freight forwarding companies will enhance the quality of service they provide their clients by providing training on customs documentation, supply chain management and technological tools; the use by freight forwarding companies of digital platforms for cargo tracking, transport management and electronic documentation should be a high priority to increase operational efficiency; greater profitability can be achieved through optimising costs by optimising routes through effective cost management, having long-term contracts with carriers, offering value-added services; maintaining clear and timely communication with clients by providing regular shipment updates, responding to customer inquiries quickly will improve customer satisfaction and client retention; improved coordination between shipping lines, customs brokers, carriers and port authorities will result in fewer delays and better performance overall for freight forwarders.

5.3 CONCLUSION:

This research highlights many systemic issues present within Logistics Operational Barriers, Management Strategies and Business Performance in freight forwarding. The most significant contributors to inefficiencies are inadequate infrastructure, port congestion, customs delay, excessive costs associated with transportation, cut-throat competition and lack of trained workforce. These are all well supported by national data showing that India's overall logistics cost is 13-14% of its GDP, twice that of the global average which is approximately 8%. ANOVA, Chi-Square, Correlation and Regression analyses demonstrate statistical significance of all null hypotheses indicating that these issues are prevalent throughout the industry impacting all participants regardless of their affiliation. Thus, there is an immediate need for joint efforts by government agencies, industry organizations, port authorities and private logistics providers to enhance both the competitiveness & efficiency of Indian freight forwarding.

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