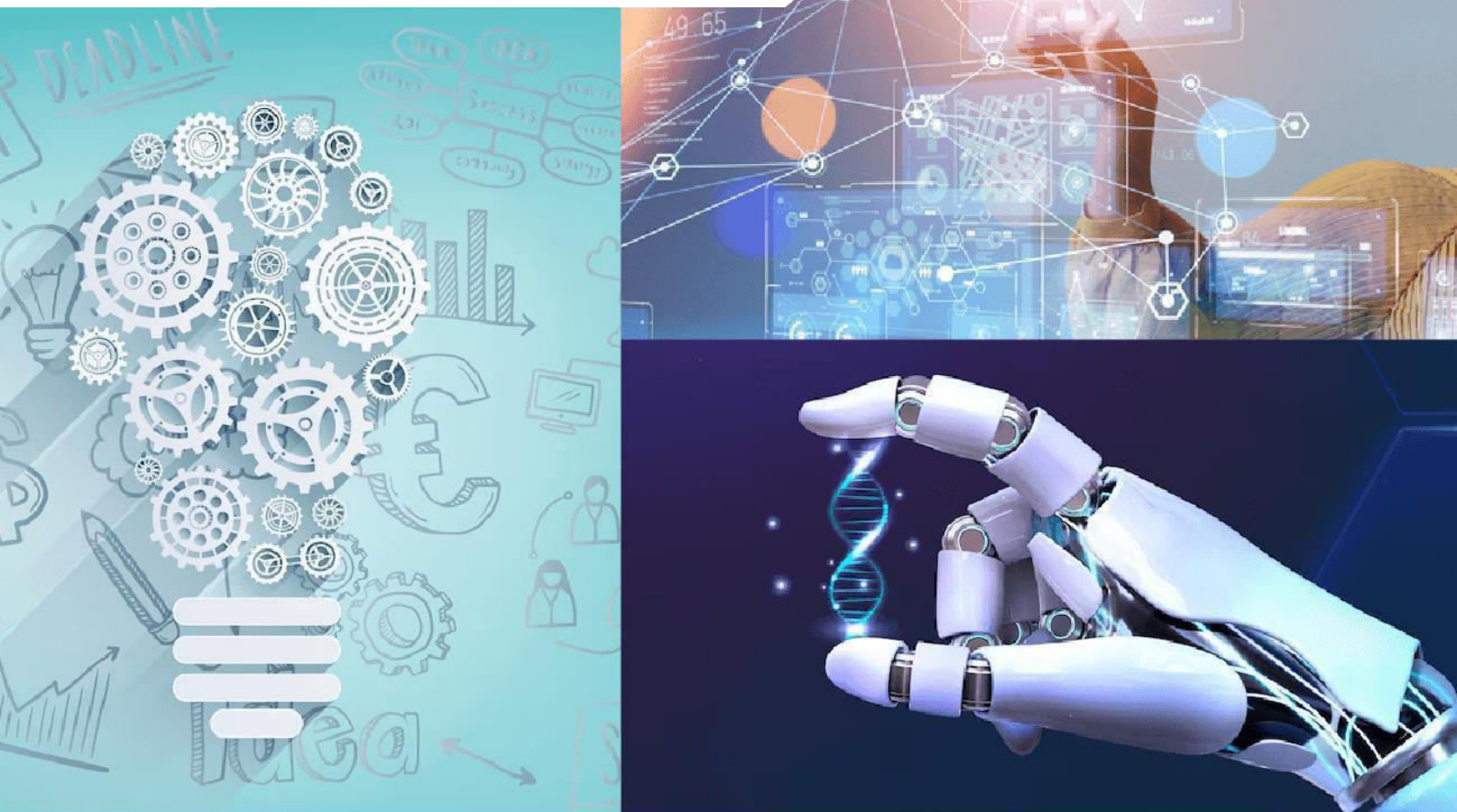




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A Study on Freight Forwarding Procedure in Imports and Exports at Triway Forwarders Pvt. Ltd., Chennai

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ABSTRACT: Freight forwarding procedures are essential for efficient international trade. This study examines import and export procedures at Triway Forwarders Pvt. Ltd., Chennai, focusing on documentation, customs clearance, cargo handling, and stakeholder coordination. Primary data from 120 respondents were analyzed using percentage, Chi-square, and correlation analyses. Findings show satisfaction with documentation accuracy, customs clearance, and coordination. However, documentation delays, regulatory complexities, and communication gaps remain. Digital documentation, improved customs coordination, and stronger communication are recommended to enhance efficiency and service performance.

KEYWORDS: Freight Forwarding Procedures, Import and Export, Logistics Management, Customs Clearance, Documentation, Supply Chain Efficiency.

I. INTRODUCTION

Freight forwarders are specialized logistics intermediaries who coordinate the transportation of goods for exporters and importers through sea, air, road, and rail. They plan suitable routes, select carriers, arrange cargo space, and manage the overall shipping process. Their responsibilities include preparing shipping documents, packaging, labeling, customs clearance, warehousing, and cargo insurance. Essential documents such as bills of lading, commercial invoices, and packing lists are verified for regulatory compliance. Freight forwarders also coordinate with customs authorities to manage duties and taxes. By providing integrated logistics solutions, they reduce delays, control costs, and ensure the safe, efficient, and timely movement of goods.

Statement of the Problem

The freight forwarding industry facilitates international trade through efficient movement of goods across borders. Freight forwarders manage cargo booking, documentation, customs clearance, and delivery while coordinating with multiple stakeholders. However, documentation errors, regulatory changes, delays, and coordination issues create operational challenges. This study examines Triway Forwarders Pvt. Ltd., Chennai, to identify process bottlenecks, evaluate efficiency, assess customer satisfaction, and examine technological and regulatory adaptability.

Objectives of the Study

The objectives of this study are

1. To study the overall freight forwarding procedures involved in import and export operations at Triway Forwarders Pvt. Ltd., Chennai.
2. To analyze the documentation processes involved in international trade transactions.
3. To examine the customs clearance procedures for import and export shipments.
4. To evaluate the efficiency of transportation and cargo handling processes.
5. To suggest measures for improving the efficiency and effectiveness of the company.

Scope of the Study

1. This study examines freight forwarding procedures for import-export operations at Triway Forwarders.
2. It covers documentation, customs clearance, cargo handling, transportation, stakeholder coordination, and technology.
3. It evaluates efficiency, identifies improvement areas, and excludes financial activities beyond control.

Limitations of Study

1. The study is limited to one organization, restricting generalization, while incomplete historical data may affect analysis.
2. Limited respondent awareness and questionnaire bias may influence quality and findings.
3. Time constraints limited analysis and sample coverage, may affect the findings.

II. REVIEW OF LITERATURE

In a study made by **M Arjun and Dr. D Anitha Kumari**, (2025), titled “Analyzing the Importance of Freight Forwarding Documentation in Facilitating Smooth Customs Processes”, published in International Advanced Research Journal in Science, Engineering and Technology, Vol. 12, Issue5, pp 1099 – 1105, it was concluded that Documentation mistakes not only delay clearances but also increase demurrage and detention costs.

Another study made by **Dr. U. Homiga and S Shara**, (2025), titled “Operational Challenges in Freight Forwarding: A Critical Analysis and Recommendations for Improvement”, published in International Journal of Progressive Research in Engineering Management and Science, Vol.05, Issue 08,pages(230 -235),it was concluded that as freight forwarders, their ability to change, innovate, and effectively lead are what drive not just their own, but potentially the entire export ecosystem of the country.

Further study made by **Koushik R et al.**, (2025) titled “A study on the challenges in import and export documentation with reference to ocean star logistics, published in Asian Journal of Management and Commerce, Volume 7 Issue 1, pages (274 - 276), it was concluded that the company demonstrates commendable efficiency in freight forwarding operations.

Yet another study made by **T. Vasumathi and K. Mythili Raja**, (2025), titled A Study on Operational Strategies for Enhancing Efficiency in Freight Forwarding: A Focus on Customs Clearance Process, published in International Journal of Modern Developments in Engineering and Science, Volume. 4, Issue 3, pp 18 – 21, it was concluded that the Focusing on these changes allows freight forwarding firms to increase customer satisfaction and remain competitive in the worldwide market.

Industry Profile

The freight forwarding industry is a vital part of global logistics, facilitating domestic and international trade through air, sea, road, and rail transportation. Freight forwarders manage documentation, customs clearance, cargo handling, warehousing, insurance, and shipment tracking. Digitalization, automation, and real-time tracking are improving efficiency and transparency.

World Scenario

Global freight forwarding is driven by globalization, e-commerce, manufacturing, and cross-border trade. Asia-Pacific dominates due to strong manufacturing and export activities. Major players include DHL Global Forwarding, Kuehne + Nagel, DB Schenker, DSV, and Nippon Express. Challenges include fuel costs, geopolitical tensions, regulations, disruptions, and sustainability concerns.

National Scenario

India’s freight forwarding sector is supported by growing trade, e-commerce, ports, infrastructure, and government initiatives such as GST, Sagarmala, Bharatmala, DFC, and National Logistics Policy.

State Scenario

Tamil Nadu, particularly Chennai, is an important logistics hub supported by major ports, industries, airports, and multimodal connectivity.

Future Outlook

The industry's future remains promising, driven by AI, blockchain, IoT, digitalization, sustainability, infrastructure development, and integrated logistics solutions.

Triway Forwarders Private Limited – Brief Profile

Triway Forwarders Private Limited, established in 1995 and headquartered in Chennai, is a private logistics company providing integrated freight forwarding and transportation services. Its core activities include air and sea freight forwarding, customs broking, warehousing, CFS operations, transportation, cargo handling, and documentation. Serving diverse industries, the company focuses on reliable, customer-centric, and cost-effective logistics solutions. Its objectives include regulatory compliance, technological adoption, global expansion, operational efficiency, and customer satisfaction.

III. RESEARCH METHODOLOGY

Research methodology is a systematic approach involving research design, data collection, sampling, and analytical tools. This study examines the role of business analytics in enhancing organizational performance at Triway Forwarders Pvt. Ltd., Chennai.

Type of Research

The study adopts Descriptive Research to understand existing practices, employee awareness, analytics usage, and decision-making processes.

Source of Data Collection

❖ **Primary Data:** Primary data were collected from employees through a structured questionnaire covering analytics usage, awareness, decision-making, and organizational performance.

❖ **Secondary Data:** Secondary data were obtained from company records, textbooks, journals, websites, and previous studies.

Area of Research

The study focuses on Business Analytics and Organizational Performance at Triway Forwarders Pvt. Ltd., Chennai.

Department Focus

The study covers Sales, Production, Inventory, and Administration/Operations departments involved in decision-making and performance improvement.

Sampling Technique and Size

Convenience sampling was used based on respondents' availability and willingness. The sample comprised 120 respondents from a population of 168, representing different departments.

Research Instrument

A structured questionnaire containing closed-ended and Likert-scale questions was used.

Tools Used For Data Analysis

Percentage Analysis: Percentage analysis compares data and examines demographics, analytics awareness, usage, and organizational performance.

$$\text{Percentage} = \frac{\text{No.of Respondents in a Category}}{\text{Total No.of Respondents}} \times 100$$

Chi-Square Test: Chi-square determines whether variables are associated, including analytics usage, performance, awareness, decision-making, and departmental usage.

$$\chi^2 = \frac{\sum (O_i - E_i)^2}{E_i}$$

Correlation Analysis

Correlation analysis is a statistical tool used to measure the relationship between two variables. It is denoted by "r" and shows the strength and direction of the relationship. It helps to identify whether variables such as business analytics usage and organizational performance are related

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

Data Analysis and Interpretation

Data analysis involves systematically organizing and examining data to answer research questions, often using visual tools like tables and charts. Data, collected through various methods, is meaningless until analyzed. Analysis identifies patterns and insights through techniques like classification and comparison. Interpretation gives meaning to findings, aligns them with research goals, and generates insights for informed decision-making and future studies.

Table: 1 Nature of Business with Triway Forwarders

Nature of Business	No. of Respondents	%
Manufacturing	25	21
Trading	37	31
Importer	31	26
Exporter	27	22
Total	120	100

It is interpreted that, 21 % of the clients are manufacturers, 31% are traders, 26 % are importers and 22 % are exporters.

Table: 2 Industry wise Classification

Industry wise clients	No. of Respondents	%
Textiles & Garments	21	18
Machinery	28	23
Chemicals	27	22
Food Products	24	20
Electronics	20	17
Total	120	100

It is observed that 18% of the clients are involved in Textile and Garments, 23% I Machinery, 22 % I Chemical, 20 % in Food Products, and 17 % in Electronics industry.

Table: 3 Association with Triway Forwarders

Association with Triway Forwarders	No. of Respondents	%
Less than 1 year	37	31
1 to 3 years	26	22
3 – 5 years	23	19
Above 5 years	34	28
Total	120	100

It is interpreted that 31 % of the respondents have the association less than 1 year, 22% have 1 to 3 years, 19 % have 3 to 5 years and 28 % have above 6 years association with Triway Forwarders.

Table: 4 Freight Forwarding Services

Freight Forwarding Services	No. of Respondents	%
Sea Freight	22	18
Air Freight	20	17
Customs Clearance	20	17
Warehousing	23	19
CFS Handling	35	29
Total	120	100

It is interpreted that 18 % do sea freight services, 17 % each do Air freight and Customs Clearance, 19 % do Warehousing and 29 % do CFS handling services with Triway forwarders.

Table: 5 Rating of Forwarding services

Rating of Forwarding services	Excellent		Good		Average		Poor	
	Res *	%	Res *	%	Res *	%	Res *	%
Customs Documentation Services	28	23	32	27	34	28	26	22
Customs Clearance Process	50	42	33	27	25	21	12	10
Communication and Coordination	48	40	40	33	29	24	3	3

The table shows that Customs Clearance Process received the highest Excellent rating with 50 respondents (42%), followed by Communication and Coordination with 48 respondents (40%). Customs Documentation Services recorded 34 respondents (28%) as the highest Average rating.

Table: 6 Frequency of Import / Export Activities

Frequency of Import / Export Activities	No. of Respondents	%
Daily	26	22
Weekly	29	24
Monthly	17	14
Quarterly	21	17
Yearly	27	23
Total	120	100

It is interpreted that 22 % do import / export activities daily, 34 % weekly, 14 % Monthly, 17 % Quarterly and 23 % yearly shipments in import and export activities.

Table: 7 Type of Cargo handled

Type of Cargo handled	No. of Respondents	%
Full Container Load (FC)	31	26
Less than Container Load (LCL)	28	23
Bulk Cargo	28	23
Oil Cargo	12	10
Gas Cargo	21	18
Total	120	100

It is interpreted that 26 % handle FCL, 23 % each handle LCL and Bulk Cargo and 10 % handle Oil Cargo and 18 % handle Gas Cargo business with Triway Forwarders.

Table: 8 Factors influencing choice of Freight Forwarder

Factors influencing choice of Freight Forwarder	No. of Respondents	%
Cost efficiency	31	26
Transit time	16	13
Reliability	25	21
Documentation support	18	15
Customer service	30	25
Total	120	100

From the table, it shows that cost efficiency is the most important factor, with 31 respondents (26%), followed by customer service with 30 respondents (25%). reliability accounts for 25 respondents (21%), while documentation support has 18 (15%) and transit time has 16 (13%).

Table: 9 Important Documentation Process

Important Documentation Process	No. of Respondents	%
Bill of Entry filing	33	28
Import documentation verification	29	24
Customs coordination	30	25
Delivery order processing	28	23
Total	120	100

The data indicates that Bill of Entry Filing is highest with 28%, followed by Customs Coordination with 25%, Import Documentation Verification with 24%, and Delivery Order Processing with 23%.

Table: 10 Major Challenges in Import procedures

Major Challenges in Import procedures	No. of Respondents	%
Customs clearance delay	23	19
Documentation errors	21	18
Port congestion	18	15
High logistics cost	30	25
Transportation delay	28	23
Total	120	100

The data shows that High Logistics Cost is the major challenge, reported by 30 respondents (25%), followed by Transportation Delay with 28 (23%). Customs Clearance Delay accounts for 19%, Documentation Errors 18%, and Port Congestion 15%.

Table: 11 Transparency in Shipment communication

Transparency in Shipment communication	No. of Respondents	%
Highly Transparent	47	39
Moderately Transparent	36	30
Neutral	25	21
Not Transparent	12	10
Total	120	100

The data indicates that 47 respondents (39%) consider shipment communication highly transparent, while 36 (30%) find it moderately transparent. 25 (21%) are neutral, and 12 (10%) consider communication not transparent.

Table: 12 Satisfactory level of Freight Forwarding Services

Satisfactory level of Freight Forwarding Services	Highly Satisfied		Satisfied		Neutral		Dissatisfied		Highly Dissatisfied	
	Res*	%	Res*	%	Res*	%	Res *	%	Res *	%
Import Documentation Support	20	16	19	16	31	26	19	16	31	26
Overall Freight Forwarding	38	32	30	25	24	20	9	7	19	16

The data indicates that Overall Freight Forwarding has the highest Highly Satisfied rating, with 38 respondents (32%), while Import Documentation Support records 20 respondents (16%). Import Documentation Support shows 31 respondents (26%) each for Neutral and Highly Dissatisfied.

IV. CHI SQUARE TEST-I

Relationship between Businesswise Classification and Transparency in Shipment Communication

Null Hypothesis H0: There is no significant relationship between Businesswise Classification and Transparency in Shipment Communication

Alternative Hypothesis H1: There is a significant relationship between Businesswise Classification and Transparency in Shipment Communication.

Table 13: Observed Frequency

Business	Transparency in Shipment Communication				Total
	Highly Transparent	Moderately Transparent	Neutral	Not Transparent	
Importer	12	9	7	3	31
Exporter	11	9	5	2	27
Manufacturer	10	7	5	3	25
Trader	14	11	8	4	37
Total	47	36	25	12	120

Source: Primary Data

$$\text{Expected Frequency} = \frac{\text{Row Total} \times \text{Coloum Total}}{\text{Grand Total}}$$

The Calculation is as follows

1. Row1 Total × Column 1 Total / Grand Total	=	31×47/120	=	12.14
2. Row1 Total × Column 2 Total / Grand Total	=	31×36/120	=	09.30
3. Row1 Total × Column 3 Total / Grand Total	=	31×25/120	=	06.46
4. Row1 Total × Column 4 Total / Grand Total	=	31×12/120	=	03.10
5. Row2 Total × Column 1 Total / Grand Total	=	27×47/120	=	10.58
6. Row2 Total × Column 2 Total / Grand Total	=	27×36/120	=	08.10
7. Row2 Total × Column 3 Total / Grand Total	=	27×25/120	=	05.62
8. Row2 Total × Column 4 Total / Grand Total	=	27×12/120	=	02.70
9. Row3 Total × Column 1 Total / Grand Total	=	25×47/120	=	09.79
10. Row3 Total × Column 2 Total / Grand Total	=	25×36/120	=	07.50
11. Row3 Total × Column 3 Total / Grand Total	=	25×25/120	=	05.21
12. Row3 Total × Column 4 Total / Grand Total	=	25×12/120	=	02.50
13. Row4 Total × Column 1 Total / Grand Total	=	37×47/120	=	14.49
14. Row4 Total × Column 2 Total / Grand Total	=	37×36/120	=	11.10
15. Row4 Total × Column 3 Total / Grand Total	=	37×25/120	=	07.71
16. Row4 Total × Column 4 Total / Grand Total	=	37×12/120	=	03.70

Table 14: Expected Frequency

Business	Transparency in Shipment Communication				Total
	Highly Transparent	Moderately Transparent	Neutral	Not Transparent	
Importer	12.14	09.30	06.46	03.10	31
Exporter	10.58	08.10	05.62	02.70	27
Manufacturer	09.79	07.50	05.21	02.50	25
Trader	14.49	11.10	07.71	03.70	37
Total	47	36	25	12	120

$$\chi^2 = \frac{\sum (O_i - E_i)^2}{E_i}$$

Table 15: Calculation of Chi Square

Observed frequency	Expected frequency	O _i -E _i	(O _i -E _i) ²	(O _i -E _i) ² /E _i
12	12.14	-0.14	0.0196	0.0016
9	9.30	-0.30	0.09	0.0097
7	6.46	0.54	0.2916	0.0451
3	3.10	-0.10	0.01	0.0032
11	10.58	0.42	0.1764	0.0167
9	8.10	0.90	0.81	0.1000
5	5.62	-0.62	0.3844	0.0684
2	2.70	-0.70	0.49	0.1815
10	9.79	0.21	0.0441	0.0045
7	7.50	-0.50	0.25	0.0333
5	5.21	-0.21	0.0441	0.0085
3	2.50	0.50	0.25	0.1000
14	14.49	-0.49	0.2401	0.0166
11	11.10	-0.10	0.01	0.0009
8	7.71	0.29	0.0841	0.0109
4	3.70	0.30	0.09	0.0243
120			Total	0.6252

$$\sum[(O_i - E_i)^2 / E_i] = 0.6252$$

Degrees of freedom = (No. of Rows - 1) (No. of Columns - 1) = (4-1) x (4-1) = 9

At 5% level of significance the value is 16.919 Calculated value = 0.6252

Table value > Calculate value, H₀ is accepted

Inference

Hence, there is no significant relationship between Businesswise Classification and Transparency in Shipment Communication.

Coefficient of Correlation

Correlation coefficient is the statistical tools used to measures the degree to which two variables are linearly related to each other. Correlation measures the degree of association between two variables.

Table 26 Relationship Between Industry Type and Overall Satisfaction

Type of Industry (X)	Overall Satisfaction (Y)	X ²	Y ²	XY
21	38	441	1444	798
28	30	784	900	840
27	24	729	576	648
24	9	576	81	216
20	19	400	361	380
ΣX=120	ΣY=120	ΣX²=2930	ΣY²=3362	ΣXY=2882

Source: Primary Data

Formula:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

Calculated value = 0.012

Interpretation

It is inferred that the correlation value $r = 0.012$ is positive, therefore there is relationship Between Industry Type and Overall Satisfaction.

Suggestions for Better Prospects

Provide advanced training for less-experienced employees, strengthen export services, expand into underrepresented markets, and develop customer-retention programs. Offer flexible pricing for high-volume shipments and improve service quality. Promote multimodal transport, ensure timely delivery through better tracking, and invest in employee development and knowledge sharing to enhance decision-making, operational efficiency, customer satisfaction, and long-term business growth.

V. CONCLUSION

The study concludes that freight forwarding is mainly driven by import-oriented businesses, with moderate exporter participation. Cost efficiency and service quality strongly influence customer preferences. Major challenges include high logistics costs, transportation delays, and documentation issues. Despite these concerns, services are generally viewed as efficient, transparent, and reliable. Companies should improve service quality, reduce costs, strengthen operations, and adopt customer-centric strategies for sustained growth.

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