Marine trader's method of payment and level of satisfaction towards infrastructural facilities of dry ports in India – an empirical study

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Abstract: All commodities and services moved by sea require at least two seaports; the importance of seaports to the smooth operation of an economy cannot be overstated. Maritime transport is used for most of the domestic and international trade (import/export). Due to a shortage of contemporary equipment and human resources throughout India, the shipping industry is experiencing delays in the transportation process for both imports and exports. Further shipping industry personalities are facing financial challenges related to the overseas transaction between two or more countries due to the huge payment formalities in India. India's shipping industry one of the backbones of Indian economy. In near future, the ministry of commerce and industry must take considerable steps for improving the effective method of payments as well as marine traders level satisfaction towards developing infrastructural facilities in dry port for utilize the great opportunities of shipping industry earnings to strengthen the India's BOP position as well as economic position and export-import volume in the world trade market.

1 Introduction

Seaports are essential for the waterborne transportation of all goods and services, their significance for the efficient functioning of an economy cannot be emphasized. Most local and international trade, including import/export, occurs via maritime transit. Despite this, there are still several challenges facing the Indian shipping sector in relation to domestic marine transportation as well as import and export. Seaborne trade is totally dependent on seaports for their operations, since they act as an interface conduit between inland and maritime container depots (dry port).

Therefore, in order to have a viable and effective maritime transport system, seaport productivity needs to be guaranteed. The present study is focusing towards determine the level of satisfaction regarding the dry port's infrastructures in the study location and to understand the payment methods performed by the maritime traders.

2 Literature review

A seaport's primary function is to ensure that goods and services are transported via its facilities quickly and safely, hence lowering average costs for shippers. "Seaports are interfaces between several modes of transport, and thus they are centres for combined transport," is how UNCTAD defines the relevance of seaports. Moreover, these are multipurpose marketplaces and industrial zones where products are not only transported but also processed, produced, and delivered. Maritime ports are multifaceted systems that, in order to adequately perform their roles, need to be integrated into logistical chains. Indian dry ports, or inland hubs for distribution and cargo consolidation, are anticipated to be essential in linking the country's numerous seaports to the global market.

However, in this process, dry ports contribute considerable role towards connecting the goods production place to port of loading place as well as port of importing place to goods consumption place in India.

India's dry ports are accessed by road or rail, with minimal value-added operations taking place. The Government of India began building a satellite port in Bombay in 1987 after realizing the value of both dry and maritime ports. The port opened for business in 1988, later the particular seaport is called as NNP port. The first dry port was subsequently built by CONCOR in Tughlakabad, New Delhi. Various marine traders at dry ports require different skills and experiences. In addition, the foreign traders must fulfil the legal obligations and business procedures that must be adhered to scrupulously. An exporter might need, for instance, a capable freight broker to bargain for the cheapest prices for a shipping voyage, a highly trained professional is involving with handling the appropriate stuffing process, another EXIM documentation professionals are following the foreign trade guidelines. For dry port users, these facilities will be great to receive all services from a single organization. However, since specialists can provide better value for money, the potential professional's marine trade activities have led to the emergence of experts in every field. As a result, the dry port operator has to make it less difficult for its customers to receive these experts' services from one location [1].

As per last count, India's 7,517 km coast includes 187 minor ports in addition to the 13 major ports. Approximately seventy-five percent of India's total trade in terms of value and 95% of its trade in volume are handled by these ports. Major ports have been overloaded and operating exceeding their intended capacity. Expansion in worldwide production and trade are the primary drivers of

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maritime transport activities. Therefore, the quantity of seaborne cargo that ports handle is primarily influenced by the levels and fluctuations of both domestic and worldwide industry. From April to February of 2022–2023, the volume of cargo handled at India's 12 major ports climbed by 9.4% to 711.55 million tonnes, up from 650.14 million tonnes in 2021–2022. All over India, the dry ports are acting as intermediary between the industries to seaports. The flow of EXIM information between shipping lines/carriers and shippers/consignees has been considerably quicker through these dry ports. In this paper, the researcher provides a perspective on existing marine traders level of satisfaction towards sea and dry ports as well as their method of payments to observe the present position of marine trade [2].

In along with infrastructure, superstructure, and equipment, a functioning seaport requires appropriate links to other forms of transportation, motivated management, and a workforce having the appropriate skills. The ninety percentage of Indians economy is based on the shipping industry only, India has 1071 ships with 722 coastal areas with 349 overseas mother vessels. Naturally India's geographically located 7517 km coastline. 70 percentages of India's maritime transport are moving through sea route only. Therefore, GOI joined with ministry of commerce and shipping for improving the Indian foreign trade through offering various incentives schemes to marine traders, enterprises, port operators, ship builders as well as logistics players. For observe the operational efficiency of Indian Mari time industry and its mediator's level of satisfaction and challenges faced by them are necessary to obtain the real time data and study for improving the Indian economy as well as BOP position. That is the reason why, this present study is attempted by the researcher for observing actual situation and recommend to the maritime authorities and others involving with shipping industry to rectify the challenges [3].

Under the Companies Act, CONCOR was founded in 1988 and started operating in 1989, using the seven ICDs that the Indian Railways currently had across the country. The establishment of CONCOR was to provide multimodal logistical assistance for India's domestic and international trade and freight. As per the GOI, Ministry of Shipping report stated at present 2020, there are 247 Dry Ports and CFS involving with shipping transportation in Indian coastal area to other destination in 170 are functional condition and rest under implementation conditions [1-4].

A quality logistics service depends on good infrastructural facilities offered by sea and dry ports in any country. The transfer of commodities across international borders is greatly aided by logistics services; ineffective logistics services hinder trade by adding to the cost of both time and money. The need for effective logistics services is growing as industrialized countries move away from traditional manufacturing and agriculture and towards international vertical specialization. By decreasing the cost of products transportation, excellent logistics services help governments who suffer by being distant from major

markets becoming stronger competitors in the international market for exports. If the administrator of dry port knows the actual requirements of dry port users, it will be useful to develop the existing facilities of dry port. Therefore, this study will investigate the level of satisfaction perceived by marine traders and method of payment followed by them in the study area [5].

3 Data and methodology

The researcher has applied the stratified random sampling method for collecting the primary data and secondary published data related to marine traders in Indian perspectives. The researcher has selected the Coimbatore as an area of the study for conducting this present study. The sample for the study area was selected by the researcher employing a stratified random selection technique. Only relevant details were included in this study, which assisted in properly achieve the objective of the present study. The obtained data was not simply accepted; it additionally contained extraneous information and excessively data are minimized.

The primary data collected by the researcher through questionnaire method. The researcher has collected the questionnaire from marine traders that are exporter concern employee, importer concern employee, mediator's organization employees in Coimbatore dry port. The published data has collected from journals, articles, magazine, EXIM times, chamber of commerce Coimbatore, port of economics website, CONCOR website and ministry of commerce, ministry of shipping. The present study period is carried out by the researcher during the period June 2024 to February 2025.

Experts in field of marine trade are given the questionnaire to evaluate critically. Twenty respondents were given the questionnaire to complete in each of the four Tamilnadu locations in order to undertake pre-testing and pilot research. The purpose of the pretesting was to confirm the questionnaire's validity and reliability. It was done to ensure that the quality of questionnaire and its clarity level. The questionnaire was modified as needed with the help of pilot study, taking into account the feedback from the chosen sample of respondent's opinion. The respondents included in the pilot study are not included in the final study (data analysis). Apart from the pilot study 20 respondents, the researcher has collected 217 respondents in the study area [5-8].

The researcher has applied simple percentage method for find out the method of payments followed by marine traders and factors analysis for observe the level of satisfaction of marine traders in the study area.

There are certain limitations in the study that the researcher has identified, as it was conducted using both primary and desk research data. The accuracy of the information provided by all respondents may not always be known because some have a tendency to provide their own experience information. This present study is entitled as method of payment (Table 1) followed by marine traders and level of satisfaction of infrastructural facilities in dry

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port in Indian perspectives, even after a careful investigation is inseparable from the limitations. This study is not included the exporter, importer, ICD officials, CFS officials, seaport authorities, documentation developers, service providers, public in this study due to time constraint [9-14].

Table 1 Method of payment followed by marine traders in dry port in Coimbatore

S. No.	Purpose of payment	Method	Always		Frequently		Some times		Rarely		Not at all	
			No.	%	No.	%	No.	%	No.	%	No.	%
1.	Receipt of Export payment by the exporters	DD	26	12	74	34.1	58	26.7	32	14.7	27	12.4
		Account	16	7.4	28	12.9	92	42.4	48	22.1	33	15.2
		NEFT	-	-	58	26.7	85	39.2	49	22.6	25	11.5
		LC	13	6.0	12	5.5	69	31.8	97	44.7	26	12
2.	Import payment by the Importer	DD	26	12	20	9.2	84	38.7	57	26.3	30	13.8
		Account	30	13.8	67	30.9	55	25.3	41	18.9	24	11.1
		NEFT	37	17.1	41	18.9	72	33.2	42	19.4	25	11.5
		LC	25	11.5	55	25.3	80	36.9	41	18.9	16	7.4
3.	Warehouse Cargo Examination Charges	Cash	23	10.6	60	27.6	77	35.5	44	20.3	23	10.6
		DD	19	8.8	62	28.6	69	31.8	52	24.0	15	6.9
		Account	24	11.1	21	9.7	93	42.9	52	24.0	27	12.4
		NEFT	31	14.3	73	33.6	40	18.4	33	15.2	40	18.4
4.	Public and Private Bonded warehouse charges	Cash	41	18.9	48	22.1	27	12.4	75	34.6	26	12
		DD	14	6.5	71	32.7	81	37.3	26	12.0	25	11.5
		Account	12	55	.58	26.7	80	36.9	55	25.3	12	5.5
		NEFT	9	4.1	27	12.4	97	44.7	56	25.8	28	12.9
5.	Terminal Charges	Cash	22	10.1	59	27.2	45	20.7	44	20.3	47	21.7
		DD	29	13.4	58	26.7	36	16.6	57	26.3	37	17.1
		Account	14	6.5	62	28.6	75	34.6	42	19.4	24	11.1
		NEFT	-	-	72	33.2	55	25.3	68	31.3	22	10.1
6.	Equipment (Trailer, Fork- lift, Crane) Charges	Cash	39	18	29	13.4	52	24	71	32.7	26	12
		DD	22	10.1	66	30.4	81	37.3	17	7.8	31	14.3
		Account	3	1.4	50	23.0	73	33.6	60	27.6	31	14.3
		NEFT	3	1.4	19	8.8	146	67.3	21	9.7	28	12.9
7.	Cargo handling(Stuffing and de-stuffing charges)	Cash	25	11.5	64	29.5	71	32.7	24	11.1	33	15.2
		DD	14	6.5	49	22.6	61	28.1	63	29.0	30	13.8
		Account	26	12	47	21.7	67	30.9	65	30.0	12	5.5
		NEFT	14	6.5	71	32.7	40	18.4	58	26.7	34	15.7
8.	Consolidation charges	Cash	34	15.7	74	34.1	61	28.1	29	13.4	19	8.8
		DD	33	15.2	85	39.2	48	22.1	37	17.1	14	6.5
		Account	24	11.1	41	18.9	137	63.1	12	5.5	3	1.4
		NEFT	3	1.4	38	17.5	120	55.3	43	19.8	13	6.0
9.	Customs documentation Charges	Cash	17	7.8	44	20.3	66	30.4	63	29.0	27	12.4
		DD	21	9.7	18	8.3	95	43.8	57	26.3	26	12
		Account	16	7.4	71	32.7	34	15.7	96	44.2	0	0
		NEFT	30	13.8	39	18	44	20.3	74	34.1	30	13.8
10.	Customs Duty and fee	Cash	25	11.5	51	23.5	66	30.4	48	22.1	27	12.4
		DD	13	6.0	80	36.9	45	20.7	60	27.6	19	8.8
		Account	50	23	46	21.2	92	42.4	17	7.8	12	5.5
		NEFT	14	6.5	50	23.0	92	42.4	39	18	22	10.1
11.	Mediator(CHA, FF, NVOC, Liners) Charges	Cash	29	13.4	53	24.4	37	17.1	64	29.5	34	15.7
		DD	14	6.5	39	18	76	35	51	23.5	37	17.1
		Account	32	14.74	70	32.25	33	15.21	64	29.49	18	8.29
		NEFT	-	-	94	43.3	58	26.7	33	15.2	32	14.7
12.	GSP Certificate, Fumigation & demurrage Charges	Cash	11	5.1	59	27.2	103	47.5	20	9.2	24	11.1
		DD	12	5.5	69	31.8	52	24	71	32.7	13	6.0
		Account	13	6.0	34	15.7	113	52.1	51	23.5	6	2.8
		NEFT	3	1.4	31	14.3	72	33.2	99	45.6	12	5.5

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4   Results and discussion

In this present study, a sample of 217 respondents was analysed. Factor analysis, the most effective multivariate technique for identifying groups of determinants, was performed on the collected data after it had been categorized, tabulated, and processed. This method connects seemingly unrelated variables, revealing the underlying structure of the data by identifying common dimensions among observable variables. The objective of this study is to condense most of the original data into the fewest possible variables for predictive purposes. To achieve this, Principal Component Analysis (PCA) was employed. PCA is a factor model in which the factors are determined based on total variance. Another important concept in factor analysis is the rotation of factors. One widely used technique for simplifying the factor structure by maximizing the variance of a pattern matrix column is the varimax rotation. Additionally, the latent root criterion is applied; the column sum of squares for a factor is known as an Eigen value, which indicates the degree of data variance. Once the common factors have been identified, factor scores are calculated for each factor. The observed variables are expressed as linear combinations of these common elements.

Table 2 Level of satisfaction perceived by marine traders in the study area

LEVEL OF SATISFACTION PERCEIVED BY MARINE TRADERS	Initial	Extraction
Total areas of the dry port	1.000	.940
Annual capacity in terms of TEU	1.000	.843
Plot areas in terms of Sq.Mtrs	1.000	.940
Open container yard area	1.000	.894
Warehouse capacity	1.000	.980
Reefer point facilities with available engineers	1.000	.958
Under one roof: surveyors, employees, and customs	1.000	.786
EDI and IT system connectivity	1.000	.794
Road and Rail connectivity	1.000	.919
Order fulfillment are	1.000	.940
Pick and Pack are	1.000	.809
Special cargo handling are	1.000	.830
Barcode scanning are	1.000	.989
Inventory visibility are	1.000	.893
Temporage controlled storage are	1.000	.950
Bonded warehouse are	1.000	.930
Non-bonded warehouse are	1.000	.915
DWELL TIME STUDY- Cargo arrival time in warehouse are	1.000	.906
Traffic time are	1.000	.978
Stuffing and de-stuffing time are	1.000	.864
Documentation processing time between entry to stuffing or De-stuffing are	1.000	.956

	Initial	Extraction
Cargo inspection time are	1.000	.937
Weighbridge facilities are	1.000	.933
Trailers facilities are	1.000	.926
Forklifts facilities are	1.000	.950
Reach stackers facilities are	1.000	.901
Top lifters are	1.000	.863
Cranes facilities are	1.000	.928
Gantry and container crane facilities are	1.000	.843
Customs filing and documentation process for export	1.000	.933
Customs filing and documentation process for import	1.000	.923
Pre-shipment documentation processes in EDI	1.000	.960
Post-Shipment documentation processes in EDI	1.000	.904
Level of cooperation of customs officials and inspectors are	1.000	.840
Dry and sea port Labour support for loading and unloading the cargo are	1.000	.944
EDI department employee advice and cooperation are	1.000	.961
Skilled professionals and trained manpower are	1.000	.874
Pilferage-Free ICD/sea port	1.000	.907
Round the clock CCTV surveillance	1.000	.904
Controlled access for visitors to the dry and marine port's gate, warehouse, and other locations	1.000	.906
Fire Fight Equipment	1.000	.954
Regular mock drill for health and safety	1.000	.862
High mast light for day light feel	1.000	.910
Underground drainage system	1.000	.962
Order management	1.000	.979
Vendor managed inventory	1.000	.889
Kitting	1.000	.941
Cargo insurance	1.000	.914
Assembly	1.000	.887
Re-packing and co-packing	1.000	.881
Reverse logistics	1.000	.878
Quarantine and disposal management	1.000	.807
Distribution of cargo	1.000	.936
Capacity to provide 3PL service	1.000	.934
Capacity to launch new trailer	1.000	.956
Capacity to handle different types of cargo	1.000	.938
Ability to adapt altering schedule	1.000	.983
Speed of action to take decisions	1.000	.902

A straightforward link between the variables and the factors is known as factor loading. Both the factors and the factor loading are contained in the factor matrix. Using a five-point rating system ranging from 5 to 1, the researcher used factor analysis to determine the degree of satisfaction of marine traders with the state of the available

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infrastructural facilities in the Coimbatore dry port. The SPSS software was used to conduct the factor analysis for the 58 factors. The analysis was carried out in phases, including the extraction method Principal Component Analysis. PCA is the extraction method (Table 2).

Table 3 Explained by total variance

Combination	Values			Squared loadings		
	Overall	Proportion of variation	Combined percentage	Total	Proportion of variation	Combined Percentage
1	8.189	14.119	14.119	8.189	14.119	14.119
2	5.526	9.527	23.646	5.526	9.527	23.646
3	5.065	8.732	32.378	5.065	8.732	32.378
4	4.489	7.739	40.117	4.489	7.739	40.117
5	3.769	6.498	46.615	3.769	6.498	46.615
6	3.599	6.205	52.820	3.599	6.205	52.820
7	3.220	5.551	58.371	3.220	5.551	58.371
8	2.914	5.024	63.395	2.914	5.024	63.395
9	2.699	4.653	68.049	2.699	4.653	68.049
10	2.482	4.279	72.328	2.482	4.279	72.328
11	2.073	3.574	75.902	2.073	3.574	75.902
12	1.899	3.273	79.175	1.899	3.273	79.175
13	1.800	3.103	82.278	1.800	3.103	82.278
14	1.540	2.656	84.934	1.540	2.656	84.934
15	1.389	2.395	87.329	1.389	2.395	87.329
16	1.185	2.043	89.372	1.185	2.043	89.372
17	1.027	1.771	91.143	1.027	1.771	91.143
18	.884	1.524	92.666			
19	.798	1.375	94.041			
20	.758	1.307	95.349			
21	.722	1.245	96.594			
22	.569	.981	97.575			
23	.437	.753	98.328			
24	.381	.657	98.986			
25	.218	.376	99.362			
26	.171	.294	99.656			
27	.092	.158	99.815			
28	.088	.152	99.967			
29	.019	.033	100.000			
30	.000	.000	100.000			
31	.000	.000	100.000			
32	.000	.000	100.000			
33	.000	.000	100.000			
34	.000	.000	100.000			
35	.000	.000	100.000			
36	.000	.000	100.000			
37	.000	.000	100.000			
38	.000	.000	100.000			
39	.000	.000	100.000			
40	.000	.000	100.000			
41	.000	.000	100.000			
42	.000	.000	100.000			
43	.000	.000	100.000			
44	.000	.000	100.000			
45	.000	.000	100.000			
46	.000	.000	100.000			
47	.000	.000	100.000			

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48	.000	.000	100.000		
49	.000	.000	100.000		
50	.000	.000	100.000		
51	.000	.000	100.000		
52	.000	.000	100.000		
53	.000	.000	100.000		
54	.000	.000	100.000		
55	.000	.000	100.000		
56	.000	.000	100.000		
57	.000	.000	100.000		
58	.000	.000	100.000		

The EIGEN values are presented in the table labelled "Initial Eigen Values." Each EIGEN Value indicates the "Total Variance" (Table 3) attributed to a specific factor. According to the extraction sum of squared loadings, the I factor accounted for a variance of 8.189, or 14.119%. The II factor explained a variance of 5.526, or 9.527%; the III factor explained 5.065, or 8.732%; the IV factor accounted for 4.489, or 7.739%; and the V factor explained 3.769, or 6.498%. The VI factor accounted for a variance of 3.599, or 6.205%; the VII factor explained 3.220, or 5.551%; the VIII factor explained 2.914, or 5.024%; the IX factor accounted for 2.699, or 4.653%; the X factor explained 2.482, or 4.279%; and the XI factor accounted for 2.073, or 3.574%. Additionally, the XIII factor explained a variance of 1.800, or 3.103%; the XIV factor accounted for 1.899, or 3.273%; and the XV factor explained 1.540, or 2.656%. The XVI factor accounted for a variance of 1.389, or 2.395%; the XVII factor explained 1.185, or 2.043%; and the variance attributed to the XVIII factor is noted. This process illustrates factor determination using Eigen Values.

Table 4 Inducing variables into factors and clustering

Factor	GENERATING VARIBALES	Factor loading with rotation
I	Dry and sea port Labour support for loading and unloading the cargo are	.735
	Order management	.719
	Assembly	.688
II	Documentation processing time between entry to stuffing or De-stuffing are	.679
III	Warehouse capacity	.673
	Cargo insurance	.665
	Vendor managed Inventory	.619
	Plot areas in terms of Square Meters.	.618
	Top lifters are	.615
IV	Temporage controlled storage are	.610
	Level of cooperation of customs officials and inspectors are	.600
	Road and Rail connectivity	.593
	Ability to adapt altering schedule	.590
V	Inventory visibility are	.579
	Fire Fight Equipment	.576
	Controlled access for visitors to the dry and marine port's gate, warehouse, and other locations	.574
VI	Pre-shipment documentation processes in EDI	.570
	Capacity to handle different types of cargo	.568
	Skilled professionals and trained manpower are	.567
VII	Underground drainage system	.562
	Capacity to launch new trailer	.562
	Pilferage-Free ICD/sea port	.560
VIII	Speed of action to take decisions	.550
	Under one roof: surveyors, employees, and customs	.548
	Customs filing and documentation process for import	.546
IX	Reach stackers facilities are	.538
	Quarantine and disposal management	.535

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	Weighbridge facilities are	.535
	Trailers facilities are	.532
	DWELL TIME STUDY- Cargo arrival time in warehouse are	.532
X	reverse logistics	.529
	cranes facilities	.526
	Kitting	.523
	Open container yard area	.523
	Customs filing and documentation process for export	.518

Seventeen factors were found to account for the maximum percentage of variance in the Table 4. Factor I is the variable Dry and Sea Port Labour Support for loading and unloading the cargo; it contributes 0.735 percent to the variance in the total. With a score of 0.518, the variable Customs filing and documentation process for export is the last factor to be secured.

As per the present study results reveals that, marine traders are receiving their export payments from importer through bank accounting transaction between two countries. At the same time, import payments are followed through bank demand draft. Marine traders are remitting their warehouse cargo examination charges through accounting transaction, public and private bonded warehouse charges, terminal charges, and equipment charges, cargo handling charges, consolidation charges, customs duty and fee are remitted through NEFT transaction in Indian sea and dry port operations area.

The ministry of commerce and shipping ministry join together for simplifies the marine traders and its facilitators like shipping mediators' way of remitting the payments in two way process both export and import payments connected with shipper payments as well as Government duties and charges for improve the operational efficiency of international traders in connected with shipping industry. As per the ministry of commerce and industry Indians exports volume in March 2021 were USD 34.45 Billion and Imports in March 2021 were USD 48.38 Billion (Rs.3,52,191.21Crore) rupees, this volume shows that India have huge export –import transaction even the pandemic period. So, the GOI, ministry of commerce & industry, ministry of shipping, port trust authorities, chamber of commerce and shipping industry inter mediatory organization must convince the meeting for improve the effective export import and its allied payments methods in India. The present method of payments are little complicated one since foreign traders are dealing with demand draft, Account transaction, NEFT transaction and letter of credit transaction for their shipping payment process, instead of the various method, if GOI is establish and propose the common e-payment method for completing the export and import payments in shipping industry it will be more useful to improve the India's BOP position, efficiency of Indian foreign traders as well as intermediaries of shipping industry in India.

5 Conclusion

Seaports are essential for linking domestic supply chains to the international market in the era of globalization. Many nations now prioritize improving port operations. In match with the growth of world GNP, the development of international business has become more noticeable. The need for shipping services is increased since a larger portion of exports are now shipped by sea through dry ports. The previous few years have seen a rise in global trade in goods, instrumental for achieving the growth of global trade is dry ports. The entire marine trade business sector activities are getting progressive growth in recent years and there are no changes in the positive growth area in shipping industry (IAME 2007). The shipping industry are facing delay shipment process in two ways exports as well as imports, due to the lack of infrastructural facilities like marine trade experts and modern equipment's in India. Further shipping industry personalities are facing financial challenges related to the overseas transaction between two or more countries due to the huge payment formalities in India. India's shipping industry one of the backbones of Indian economy. It is acting as a major role between India versus other countries in terms of transfer the surplus goods to world market and imports the deficit goods to Indian markets through sea routes. Right now, during the pandemic period 2020-21 Indian shipping industry are acting as major safeguard elements to supply the basic medicines and its related goods from world market to India. As per the WTO prediction, the world trade volume will fall down nearly 32% due to the impact of Covid-19. The entire marine trade is affected from shipyards to seaports. It shows that, India's marine trade operation bottlenecks in terms infrastructural facilities and lack of smart technologies like port digitization, artificial intelligence, RFID technologies and internet of things. In near future, the ministry of commerce and industry must take considerable steps for improving the effective method of payments as well as marine traders level satisfaction towards developing infrastructural facilities in dry port for utilize the great opportunities of shipping industry earnings to strengthen the India's BOP position as well as economic position and export-import volume in the world trade market.

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