

Trend and Growth of World Traffic Handled and Freight Earning of India

D Amutha

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Abstract

Port is a catalyst for growth and facilitates increase in foreign exchange earnings. The present study attempts to discuss the trend and growth of world maritime nations, volume of cargo and container traffic handled by the major ports of the world and traffic and freight earning of central inland water transport corporation (CIWTC) of India from the period 2001–02 to 2013–14. The objectives of the present study are:

1. To study the world maritimenations.
2. To find out the volume of cargo and container traffic handled by the major ports of the world and
3. To examine the trend and growth of world maritimenations, volume of cargo and container traffic handled by the major ports of the world and traffic and freight earning of central inland water transport corporation (CIWTC) of India from the period 2001–02 to 2013–14.

The study based on secondary data from 2001–02 to 2013–14. The secondary data collected from Administrative reports, various publications of Port Trust, the reports of the Department of Economics and Statistics and Ministry of Shipping, Government of India, journals, books, edited books, reports, documents, theses and websites. The tools used for the study were percentage analysis, mean, standard deviation, compound growth rate and coefficient of variation. It is found that the trend coefficient was found to be statistically significant for world maritimenations, volume of cargo and container traffic handled by the major ports of the world and traffic and freight earning in India. It indicates, on average, it had increased by 7.3 percent for world maritimenations, 8.1 percent for cargo and container traffic handled by the major ports, and 4.1 percent for traffic and freight earning per annum. The growth rates are found to be 13.68 percent, 5.82 percent, and 6.91 percent for world maritimenations, cargo and container traffic handled by the major ports of the world and traffic and freight earning in India.

Keywords: Shipping and transport; Economic development; Foreign exchange; Cargo hinterland, Freight earning.

Introduction

Ports play a vital role in India's overall economic development. Shipping and transport is an integral

part of the production process and therefore has a direct bearing on a country's economy and development.¹

A fully integrated safe transport network which supports social and economic regeneration and ensures good access for all which, is operated to the highest standards to protect the environment and ensure good quality of life.² Transportation, especially from water to land, combined with the fact that water transportation is generally cheaper than land transportation where time is not an important consideration, are important in explaining the location of many cities.³

The total ton-miles by sea are more than twice the total ton-miles by road, railway and air put

Author's Affiliation: Associate Professor of Economics, St. Mary's College (Autonomous), Thoothukudi, Tamil Nadu 628001, India.

Coressponding Author: D Amutha, Associate Professor of Economics, St. Mary's College (Autonomous), Thoothukudi, Tamil Nadu 628001, India.

E-mail: amuthajoe@gmail.com

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together.⁴ A strong and vast cargo hinterland, which generates large volumes of export and import cargo for the port forms its real backbone of support.⁵ Maritime ports are situated at an interface between land and sea.⁶ In industrial progress extensive areas are devoted to maritime industrial development (MEDAs).⁷ Ministry of Shipping reports that around 95 percent of India's trade by volume and 70 percent by value take place through maritime transport.⁸

A port is a location on a coast or a shore that contains one or more harbours where ships can dock.⁹ Ports are the major transport hubs which facilitates cargoes import and export across globe by crossing the geographical boundaries.¹⁰ A major port on its own national territory of a country is the best possible guarantee of economic and political independence.¹¹

The ports have developed over the ages from primitive facilities in ancient times, to multi-purpose ports that handle a variety of cargoes to specialized ports.¹² The Government of India took the responsibility of developing the ports in order to enhance Trade and Commerce.¹³ Port and shipping are very important from the point of view of foreign trade as they export commodities, which earn valuable foreign exchange and import essential inputs for development of the country.¹⁴

In this context, the present study attempts to discuss the trend and growth of world maritimations, volume of cargo and container traffic handled by the major ports of the world and traffic and freight earning of central inland water transport corporation (CIWTC) of India from the period 2001-02 to 2013-14.

Objectives

The objectives of the present study are:

1. To study the world maritimations.
2. To find out the volume of cargo and container traffic handled by the major ports of the world and
3. To examine the trend and growth of world maritimations, volume of cargo and container traffic handled by the major ports of the world and traffic and freight earning of central inland water transport corporation (CIWTC) of India from the period 2001-02 to 2013-14.

Materials and Methods

The study based on secondary data from 2001-02 to 2013-14. The secondary data collected from Administrative reports, various publications of Port Trust, the reports of the Department of Economics and Statistics and Ministry of Shipping, Government of India, journals, books, edited books, reports, documents, theses and websites. The tools used for the study were percentage analysis, mean, standard deviation, compound growth rate and coefficient of variation.

Results and Discussion

Greater transport efficiency is the instrumental driving force behind the growth of world economy. In addition, the evolving political and economic environment has increased the proportion of intercontinental trade flows, leading to considerable changes in transport, logistics and supply chain management. In this regard, the logistical environment for sea trade has changed considerably within the last 15 years. That is, technology, finance, travel and consumption based services have led to the unprecedented growth of cargo and container movements.

This in turn has led to changes in maritime transport and logistics chains, and associated power structures. The worldwide economic down turn of 2008-2009 has also had an impact on ports and allied maritime sectors. While it exalted Asian countries including China, India and Persia, along with Russia and Brazil, in terms of global production and supply linkage, it caused recede of power of western economies, in particular that of Anglo Saxon ones. For example, no port in America is able to witness at least half the cargo and container traffic of Shanghai (in China) or Singapore. Most ports and ship owners therein experienced decreasing freight volumes or through puts. India is shaded at the 14th place.

The greatest maritimations upon earth are listed in Table 1.

The table clearly demonstrates the dominance of China and other Asian economies in maritime trade. The list of major ports of the world further reinforces this argument. Table 1 presents the details about major ports of the world. The top 50 maritimation's performance of the port sector, on an average over a period China was found to be higher than other maritime nations upon the world.

Table 1: Topmaritime Nations of the World (Lakh TEU's)

Rank	Country	2010	2011	2012	2013	Mean (X)	Standard Deviation (S.D)
1.	China	1,088.00	1,302.90	1,438.97	1,550.17	1345.01	198.95267
2.	United States	373.54	423.38	429.99	430.98	414.4725	27.49608
3.	Singapore	265.93	291.79	307.28	324.22	297.305	24.75698
4.	Hong Kong SA	210.40	236.99	243.84	231.00	230.5575	14.42593
5.	Korea, Rep.	157.00	185.43	208.34	214.54	191.3275	26.08578
6.	Malaysia	159.23	182.67	201.39	208.67	187.99	22.08063
7.	Japan	162.86	180.98	194.18	184.76	180.695	13.12171
8.	United Arab Emirates	144.25	151.77	167.80	172.12	158.985	13.15813
9.	Germany	132.96	148.22	172.19	160.56	153.4825	16.8219
10.	Spain	118.03	126.13	138.37	147.15	132.42	12.89718
11.	Netherlands	100.66	113.45	120.73	121.04	113.97	9.5413
12.	Belgium	97.01	109.85	110.34	107.29	106.1225	6.22046
13.	Italy	95.32	97.87	95.29	99.41	96.9725	2.02554
14.	India	80.14	97.53	99.79	98.26	93.93	9.24144
15.	Indonesia	72.55	84.83	89.66	93.25	85.0725	9.03306
16.	United Kingdom	76.71	85.90	89.21	92.78	86.15	6.89194
17.	Brazil	65.90	81.39	85.36	88.64	80.3225	10.06157
18.	Egypt	62.50	67.09	77.37	80.47	71.8575	8.46276
19.	Thailand	58.98	66.49	71.71	73.72	67.725	6.57826
20.	Panama	45.97	60.03	69.11	71.88	61.7475	11.67266
21.	Australia	62.00	66.68	70.12	71.83	67.6575	4.3373
22.	Vietnam	49.37	59.84	63.35	65.89	59.6125	7.2649
23.	Saudi Arabia	44.31	53.13	56.95	65.57	54.99	8.81854
24.	Turkey	45.22	55.74	59.90	62.30	55.79	7.54983
25.	Philippines	43.07	49.47	52.64	57.21	50.5975	5.93946
26.	France	44.91	53.47	53.63	56.34	52.0875	4.96289
27.	Canada	41.92	48.30	50.59	52.96	48.4425	4.74633
28.	Sri Lanka	34.64	40.00	42.63	44.33	40.4	4.23302
29.	South Africa	37.26	38.06	39.90	44.24	39.865	3.11908
30.	Mexico	28.74	36.94	40.80	42.44	37.23	6.11155
31.	Russian Federation	24.28	32.00	34.49	39.43	32.55	6.31911
32.	Chile	27.96	31.72	34.50	35.88	32.515	3.49492
33.	Oman	37.68	38.93	36.33	32.93	36.4675	2.5863
34.	Greece	9.35	11.65	19.74	30.39	17.7825	9.51307
35.	Iran	22.06	25.93	27.40	28.50	25.9725	2.8128
36.	New Zealand	23.25	24.63	25.17	27.99	25.26	1.99148
37.	Malta	23.24	24.51	24.45	26.28	24.62	1.2518
38.	Israel	20.33	22.82	23.94	25.58	23.1675	2.20523
39.	Colombia	20.57	24.44	24.03	24.99	23.5075	1.99744
40.	Pakistan	20.58	21.49	21.93	22.81	21.7025	0.92799
41.	Argentina	16.27	20.22	21.59	22.45	20.1325	2.73384
42.	Jamaica	16.90	18.92	20.00	20.80	19.155	1.68921
43.	Portugal	12.33	16.22	17.58	19.16	16.3225	2.92023
44.	Peru	12.33	15.34	18.15	18.87	16.1725	2.98021
45.	Morocco	12.22	20.58	20.83	18.00	17.9075	4.00164
46.	Sweden	12.51	13.91	15.15	15.60	14.2925	1.38666
47.	Dominican Republic	12.63	13.83	14.61	15.20	14.0675	1.11051
48.	Bangladesh	11.82	13.56	14.32	14.89	13.6475	1.3346
49.	Finland	11.26	12.48	13.27	13.88	12.7225	1.13097
50.	Poland	6.72	10.45	12.14	12.63	10.485	2.67809

Sources: Containerisation International Year Book, 2014 and World Development Indicators, 2014

The average amount over the period from 2010 to 2013 was 198.95267 lakh TEU.

The volume of cargo and container traffic handled by the major ports of the world is given in Table 2.

The Table 2 describes the volume of cargo and container traffic handled by the major

ports of the world such as Shanghai, Singapore, Rotterdam, Guangzhou, Ningbo, Tianjin, Qingdao, Qinhuangdao, Hong Kong, Busan, S. Louisiana, Houston, Shenzhen, Dalian, Port Hedland, Nagoya, Antwerp, Port Kelang, Dampier, Chiba, Ulsan, Inchon, Tubarao, Dubai Ports and Yokohama respectively.

Table 2: Major Ports of the World

Cargo Volume wise (Metric, Freight or Revenue Tonne)			Rank	Container Traffic wise (TEU)		
Port	Country	Volume (Tonne)		Port	Country	TEU
Shanghai	China	5,34,371	1.	Shanghai	China	2,90,69,00
Singapore	Singapore	5,01,566	2.	Singapore	Singapore	2,84,31,10
Rotterdam	Holland	4,29,926	3.	HongKong	China	2,36,69,24
Guangzhou	China	4,25,600	4.	Shenzhen	China	2,25,09,70
Ningbo	China	4,08,150	5.	Busan	S.Korea	1,41,94,33
Tianjin	China	4,00,000	6.	Ningbo	China	1,31,44,00
Qingdao	China	3,50,120	7.	Guangzhou	China	1,24,86,90
Qinhuangdao	China	2,76,282	8.	Qingdao	China	1,20,12,00
Hong Kong	China	2,67,815	9.	DubaiPorts	UAE	1,15,75,77
Busan	S. Korea	2,62,963	10.	Rotterdam	Holland	1,11,45,80
S. Louisiana	USA	2,14,337	11.	Tianjin	China	1,00,80,00
Houston	USA	2,06,055	12.	Kaohsiung	Taiwan	91,21,211
Shenzhen	China	2,04,860	13.	PortKelang	Malaysia	88,71,745
Dalian	China	2,00,000	14.	Antwerp	Belgium	84,68,475
Port Hedland	Australia	1,98,997	15.	Hamburg	Germany	78,95,736
Nagoya	Japan	1,85,703	16.	Los Angeles	USA	78,31,902
Antwerp	Belgium	1,78,167	17.	TanjungPelepas	Malaysia	62,98,734
PortKelang	Malaysia	1,68,558	18.	LongBeach	USA	62,63,499
Dampier	Australia	1,65,025	19.	Xiamen	China	58,24,256
Chiba	Japan	1,55,256	20.	NewYork/Jersey	USA	52,92,023
Ulsan	S.Korea	1,50,993	21.	Dalian	China	52,42,000
Inchon	S.Korea	1,49,077	22.	LaemChabang	Thailand	50,68,076
Tubarao	Brazil	1,32,031	23.	Bremen	Germany	48,88,655
DubaiPorts	UAE	1,30,518	24.	TanjungPriok	Indonesia	47,14,857
Yokohama	Japan	1,29,640	25.	Tokyo	Japan	42,84,944

Source: The National Marine Transport Agency of Brazil (ANTAQ), 2012.

Table 3: Traffic and Freight Earning of Central Inland Water Transport Corporation (CIWTC)

Period	Traffic Carried ('000 Tonnes)	Tonne Km Performed (Lakh)	Total Earnings (Rs. Lakh)
2001-02	68	269	462
2002-03	86	392	560
2003-04	66	315	497
2004-05	54	242	479
2005-06	85	143	489
2006-07	220	257	578
2007-08	200	238	405
2008-09	74	110	409
2009-10	189	165	434
2010-11	49	44	260
2011-12	31	26	168
2012-13	21	2	153
2013-14	8	0.15	175
CGR	-15.18%	-43.80%	-7.20%
Average	88.5385	169.4731	389.9231
SD	69.56605	127.64613	149.91634

Source: Transport Research Wing, M/o Road Transport and Highways

Traffic and freight earning of central inland water transport corporation (CIWTC)

The details of the traffic and freight earning of central inland water transport corporation (CIWTC) of India from the period 2001-02 to 2013-14 are presented in Table 3.

The Table 3 reveals that the growth of the traffic of central inland water transport corporation (CIWTC) of India from the period 2001-02 to 2013-14 decreased to 68 tonnes to 8 tonnes. The tonne km of central inland water transport corporation (CIWTC) of India from the period 2001-02 to 2013-14 decreased to 269 lakh to 0.15 lakh. The earnings of central inland water transport corporation (CIWTC) of India from the period 2001-02 to 2013-14 decreased to 462 lakh to 175 lakh. The CAGR analysis reveals the traffic and freight earning of central inland water transport corporation (CIWTC) of India from the period 2001-02 to 2013-14 showed a negative growth with -15.18 percent, -43.80 per cent and -7.20 per cent respectively.

It is also inferred from Table 3 that the performance of growth of the earnings of central inland water transport corporation (CIWTC) of India from the period 2001-02 to 2013-14, on an average over a period was found to be higher than traffic performance. The average amount over the period from 2001-02 to 2013-14 was Rs. 389.9231 lakhs. The average amount of traffic carried over the period from 2001-02 to 2013-14 was 88.5385 tonnes.

The trend and growth of world maritimations, volume of cargo and container traffic handled by the major ports of the world and traffic and freight earning of central inland water transport corporation (CIWTC) of India from the period 2001-02 to 2013-14 are shown in Table 4.

Table 4: Trend and Growth of World Maritimations, Volume of Cargo and Container traffic Handled by the Major Ports of the World and traffic and Freight Earning in India

Particulars	Trend Coefficient		R ²	Compound Growth Rate in Percent
	a	b		
Top Maritime Nations of the World	8.3417	0.073*(8.1934)	0.639	13.68
Major ports of the world	6.9502	0.081*(9.6431)	0.942	5.82
Traffic and freight earning	6.1341	0.041*(5.8472)	0.707	6.91

Figures in brackets represent 't' values

*Significant at 5 percent level.

It found from Table 4 that the trend coefficient was found to be statistically significant for world maritimations, volume of cargo and container traffic handled by the major ports of the world and traffic and freight earning in India. It indicates, on average, it had increased by 7.3 percent for world maritimations, 8.1 percent for cargo and container traffic handled by the major ports, and 4.1 percent for traffic and freight earning per annum. The growth rates are found to be 13.68 percent, 5.82 percent, and 6.91 percent for world maritimations, cargo and container traffic handled by the major ports of the world and traffic and freight earning in India.

The value of R² indicates that the variations in world maritimations (0.639), cargo and container traffic handled by the major ports of the world (0.942), and traffic and freight earning in India (0.707) explain variations in dependent variables to the extent of 64 percent, 94 percent and 71 percent respectively.

Conclusion

The maritime sector was growing at a sharper step and those plans took into thought the potential growth rates. But, inappropriately, with the global slow down and recession, the major global economies have taken a somersault in every sector. Shipping and Ports are no exclusion. Accordingly, cargo traffic which had been growing at a rate of about 11% annually has shown lower growth rates. Although India has prospered in efficiently going the slowdown with the important strong suit of the economy and the systems and with the numerous policy measures, attaining the previous growth rates still left over a task for the economy. The present economic displays obviously point to a healthy growth of the Indian economy.

References

1. National Council of Applied Economic Research. Contribution of Shipping to the National Economy. Indian Shipping Industry, Retrospect and Prospect 1993;59.
2. <http://www.scribd.com>
3. James A Quinn. Location and Size: Urban Sociology, New Delhi: Urasia Publishing House, 1986.pp.58-59.
4. Jansson JO and Shneerson D. Linear Shipping Economics. Chapman and Hall Ltd., New York, 1987.p.1.

5. India Ports Report. Port Infrastructure Development in India. (Mumbai: I-Maritime, 2003);23.
 6. Ramachandran S. Lagoon ecosystems of the east of India. In book: Coastal Environment Management, edited by Nachandran, 2001.pp.48-67.
 7. Hilling D. Spatial approaches to port development', Seaport system and spatial change, edited by Hoyle B.S and Hilling D, John Wiley and Sons. 1984.
 8. www.ibef.org
 9. Yen - Chun Jin Wu and Chia - Wen Lin. National port competitiveness: Implications for India. Management decision 2008;46(10):1482-1507.
 10. Gujar G. Growth of Containerization and Multimodal Transportation in India. M.Sc. Thesis in Maritime Economics and logistics, Erasmus University, Rotterdam 2006.
 11. Kumar PM. Indian Economy (Immanuel Publications, Madurai, 1992.p.152.
 12. India Maritime Report Volume 2, i-maritime, Navi Mumbai, 2009.p.329.
 13. Raghavendra R. Third-party logistics could pare firms' inventory costs. Business Standard, November 22, 2003.
 14. Animesh Ray. Maritime India- Ports and Shipping. Pearl Publishers, Calcutta, 1993, Foreword.
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