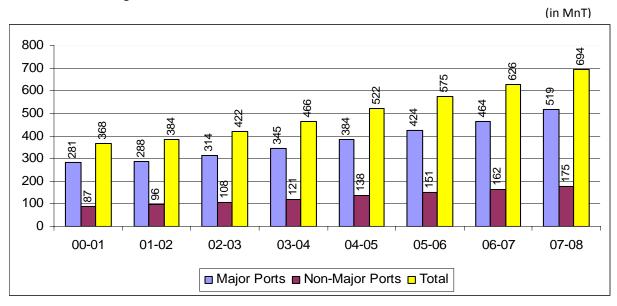
Indian Port Sector

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There is a need for Indian ports to transform into world-class ports, as a high correlation exists between a country's economic growth and cargo throughput. As more seaports and terminals – both public and private ones join the market race for their share of the ocean cargo pie in India, a key differentiator of their service quality could be depending on how well they are geared to provide better turnaround time for ships – by eliminating berthing delays and ensure more efficient handling of cargo by reducing the cargo dwell time at the port and along the logistics chain.

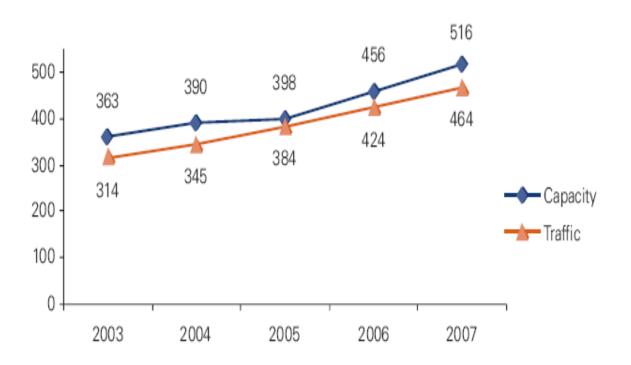
Over the last decade, Indian ports sector have seen some far reaching changes with private sector participation & Joint Ventures permitted under Major Port Trusts Act. To that effect, comprehensive Guidelines were issued in 1996, Joint Venture guidelines in 1998, Model Bidding Documents in 2000 and new Model Concession Agreement with further refinements introduced recently. 100% FDI is permitted in both Indian ports & especially for port projects characterized by competitive bidding & lease period of BOT upto 30 years. There is also an independent Tariff Regulatory Authority and all areas of port operation is open for Private Sector Participation. Such far-sighted initiatives has seen major global port operators viz. APM Terminals, Port of Singapore Authority (PSA), Dubai Ports International, P&O Ports Australia Pvt. Ltd. (now Dubai Ports World) investing substantially in Indian port development projects.

Since 2000, the total traffic handled by Indian ports have risen from 368 MT to 694 MT in 2008 and the details regarding the traffic handled by both Major & Non-Major Indian Ports are given below.

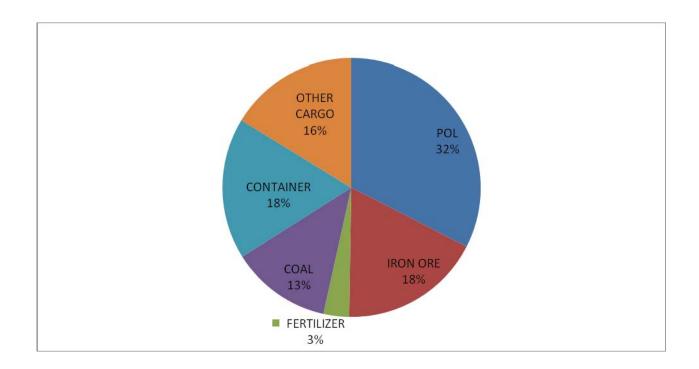


It may be observed from the above that during the period under review the total traffic handled at Indian Ports grew @ 9.5%, at Major Ports @ 9.2% and at Non-Major Ports @10.5% (CARG) . Further, details regarding traffic handled vis-a-vis capacity available at Major Indian Ports during the period from 2003 to 2007 together with the commodity-wise details of traffics handled for the year 2007-2008 is given below.

Traffic vis-à-vis capacity at major ports (in MnT)



Commodity-Wise Traffic Handled At Major Ports										
(During April 2007 To March 2008 - In '000 Tonnes)										
Port	P.O.L.	Iron	Fertilizer		Coal		Container		Other	Total
		Ore	Fin.	Raw	Thermal	Coking	Tonnage	Teus	Cargo	
Kolkata	22,364	10,309	359	379	1,797	5,462	7,381	425	9,231	57,282
Paradip	1,747	12,959	136	3,420	13,348	4,733	54	5	6,041	42,438
Vizag	19,805	18,686	3,284	715	2,896	7,488	1,133	71	10,590	64,597
Ennore	319	2,190	-	-	9,051	-	-	-	3	11,563
Chennai	12,794	10,815	616	266	2,334	1,656	18,049	1,020	10,624	57,154
Tuticorin	460	-	1,098	632	6,112	-	5,630	450	7,548	21,480
Cochin	11,299	-	83	271	246	-	3,239	254	672	15,810
N.Mangalore	21,781	9,266	831	9	1	1,691	319	21	2,122	36,019
Mormugao	874	27,329	192	-	357	3,887	135	13	2,354	35,128
Mumbai	37,074	-	97	213	2,951	-	1,632	117	15,072	57,039
J.N.P.T.	2,243	-	-	-	1	-	51,840	4,059	1,673	55,756
Kandla	38,177	419	3,916	160	935	244	2,639	161	18,403	64,893
All Ports	1,68,937	91,973	10,612	6,065	40,027	25,161	92,051	6,596	84,333	5,19,159



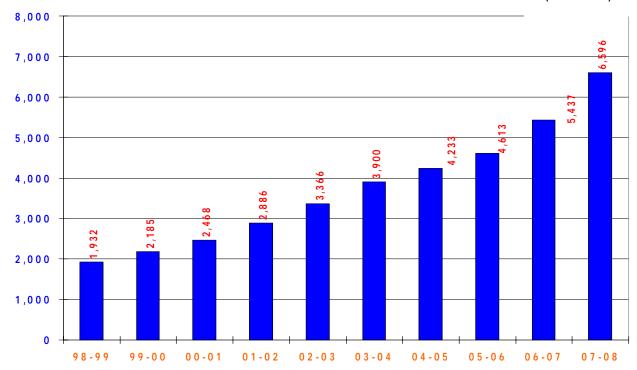
As can be observed from the above, during 2007 – 2008, POL constituted 32% of total traffic handled at major Indian Ports followed by Iron – Ore, Containerised cargoes etc.

Traditionally, Seaport development strategies, design and planning schemes have focused on seaside links such as nautical constraints, seashore infrastructure, ship / cargo handling equipment, and other related superstructure facilities. As a result, much of port operational and management concepts and practices, were developed around the seashore interface, rather than the landside connections and related value-added logistics activities. Port operations and planning, marketing and competition, performance measurement and monitoring systems, were almost entirely directed towards sea transport and shipping services, with little or no emphasis on inland transport services, and much less on landside logistics operations, services, and facilities.

High BOF (Berth Occupancy Factor) is often accepted at Indian Ports and sometimes it is the aim to maximize the BOF, where, in fact, a lowering to 60-70% should be strived for. This means that congestion is accepted at the expense of port users (and eventually Indian producers / consumers). Many ports are at or close to capacity and due to the constraints in available land there are few possibilities to expand. Generally speaking the productivity on the berths is on the low side, a capacity increase can be achieved through mechanization of cargo handling and other efficiency improvement measures. Ports also used to be 'berthminded': constructing new berths before the capacity of the existing ones was increased. Fortunately, there is presently a greater consciousness regarding increasing capacity of the existing facilities. Finally, the move to a door-to-door concept of containers is to be considered to its fullest extent.

Details regarding the Container Traffic handled at Major Indian Ports ('000 TEUs) during the period from 1998 to 2008 is given below and it can be observed that the total traffic during the period under review grew @ 14.6% (CAGR), which is faster than global container traffic growth estimated to be @ 9% - 9.5%.

('000 TEUs)



Capacity for container handling at the Major Ports is limited. The largest one JNPT, is predicted to reach its fullest capacity by the year 2014. The upcoming private ports may solve the capacity problem, although it should be mentioned that not one of them is capable to handle several millions of TEU's in the near future. Nevertheless, it may be expected that they will be the fastest within the country to create capacity. A choice could be made: should this be left to the private sector or: Should the Government create new major (container) ports on the East & West Coast? There has to be a complete focus on making use of economies of scale, India is a suitable country for it. In the South, Ennore seems to be in the best position for relatively easy container terminal development. On the East coast: Can the new West Bengal port become a new container hub? On the West coast it should be investigated whether new container port development needs to take place in Gujarat or Maharashtra. Complementing the above, short terms measures for ramping up equipment handling capacity at Ports have to be addressed. Simply put, spare capacity needed to be created in time. Further, there is an urgent need to foster competition, which is strongly related to port reform measures involving a long drawn out process; raising quality of services & decreasing costs for port users to be set as the primary goal of port managers; efficiency increase is needed, which can easily be achieved when creating a competitive environment; large scale projects such as the development of large container terminals, should be integrated with hinterland connectivity projects; modulate / sensitize Major Ports' mind-set when Private ports will gain market share, at least in the short term.

To present a regional comparison, the turnaround time in major Indian ports is estimated at about 1.77 days, as compared to 0.5 in Singapore. Similarly, the vessel evacuation rate is 40 containers per hour, compared to 100 in Singapore and the dwell time is 3.78 days as against 0.6 in Singapore. Even in terms of infrastructure. the Indian ports need to ramp up their capacities. Jawaharlal Nehru Port Trust handles about 60% of India's container throughput; it has three terminals at present with a total quay length of 1992 mts that is adequate to accommodate nine vessels at a time. Compare this to PSA Singapore, which has four terminals with a total quay length of 11,754 mts that can accommodate about 41 container vessels at a time. Further, the Major Ports in India put together have a market share of 75% and form a kind of cartel and there is hardly competition between the Major Ports. Intermodal competition is virtually lacking due to an insufficient and inefficient supply of hinterland infrastructure and rolling stock. Within-port competition is almost absent with JNPT being a welcome exception. International port competition for transhipment is impossible due to the high port costs in India and present regulations (cabotage) etc.

Indeed, the Indian ports are virtually struggling to provide flawless basic infrastructure and are equipped to provide only partial electronic data interchange services. If ports in India are to emerge as key facilitators and accelerators towards economic development, they need to be globally competitive. Doubtless, the Indian ports have been exceeding their cargo handling targets set by the Government. This however, largely reflects cargo demand pressure acting on ports helping them improve their throughput performance. There is certainly much greater scope to further improve throughput performance by achieving higher productivity from existing facilities. The overall impact of entry of Private Port Operators would be addition of the much needed capacity and that too created under transparent conditions, royalties / profit sharing arrangement etc. fixed under full glare of public debates, due discussion with users, trade, trade intermediaries etc. If the entry of Private Port Operators with much needed transparency in the award of port development projects (right from tendering process down to the award of the contract), together with requisite firmness, resolve, clarity and consistency in regulatory policy and procedures and based on effective communication of all above to international investor community would definitely aid in the injection of the much needed capital, finance, technical expertise and capacity to cater for the country's economic growth. Consequently, there would be definite improvement in the competitive structure of the Indian Ports sector, especially when you have a situation where the Major Ports have a market share of 75% and form a kind of cartel. Needless to say, there is clear and present danger to the Major Ports and they better get their act together.

Masterplans in the Indian Port Sector context are considered to a limited extent. A land use plan is almost always developed in most ports. However, a clear vision on port planning and phased development with logistics integration is lacking in many ports. There has to be a concentrated effort to develop detailed strategic port master plans having the following terms of reference viz. foster competition amongst Major Ports; delegation of powers & responsibilities; autonomy in tariff setting & investing; fast decision making process; operational freedom & professionalism in the ports sector.

A serious attempt at port reform focussing on (1) improving port organization, (2) liberalization as is already the case in JNPT and which has worked out well, (3) Commercialization featuring delegation of powers and responsibilities from Ministry to ports (shift to landlord port management model is the major activity to be undertaken, whereby Port Trust will contract out non-core business, port operations will be transferred to private sector and whereby Port Trust will invest in infrastructure) (4) Corporatisation, which is possible after commercialization, although less important and, (5) Privatization, which will take place when transferring to the landlord management model through the sale of superstructure assets. Another privatization aspect could be the formation of joint-ventures with private sector operators in the total transport chain to the hinterland.

A positive trend witnessed in the domestic port sector is the increased interest being shown by financial investors, such as banks, private equity funds and even pension funds to invest in port assets. Also recently merger and acquisition trends in the port sector are being seen. It is also reported that the Government has approved 17 private or captive port projects, of which 13 provide capacity addition of around 38.8 million tonnes per annum. Estimates of on-going private investments in the port sector is estimated at about Rs. 17,000 crore, including Rs. 1,400 crore in Mundra, Rs. 3,000 crore in Dahej, Rs. 2,600 crore in Vizhinjam, Rs. 1,700 crore in Dhamra and Rs. 2,00 crore in Gangavaram.

Privatisation has been generally accepted as an effective means to increase competition and introduce market forces in the respective sector. Privatization of port development can also be expected to yield better and more optimal utilization of various physical assets being created in the ports. Indeed, it would be interesting to also see how the positive spin-offs from improved port operational efficiency can be benchmarked to the incremental capital cost of adding on fresh port capacity in the Indian context.

Details regarding the consolidated forecast for Major Indian Ports by main commodity groups for the year 2011-2012 and 2025-2026 as well as the capacity addition (in MT) envisaged at Major Indian Ports by the end of the 11th Five Year Plan i.e. by 2012 is given below.

(in MnT)

Commodity	2011-2	2012	2025-2026		
POL	216.51	29%	335.95	21%	
Iron Ore	108.97	15%	139.52	9%	
Coal	126.68	17%	189.61	12%	
Containers	161.38	22%	679.97	43%	
Fertilizers	19.76	3%	37.2	2%	
Other Cargo	106.11	14%	212.82	13%	
Total	739.41	100%	1595.07	100%	

Particulars	Present Capacity (March 2007)	Cap. Addition (11th Plan)	Capacity by 2012
Major Ports	508.60	493.20	1,001.80
Non-Major Ports	228.31	345.19	573.50
Total	736.91	838.39	1,575.30

As can be observed from the above there is a rise envisaged in the total traffic expected to be handled by Major Indian Ports and it can be safely assumed that the Transport Planners are well seized of the expected rise in traffic and have taken proactive measures to increase the capacity at Indian Ports.

Seaports of India have been playing a historical role in the development of India's maritime trade accounting for over 95% of cargo volumes. Undoubtedly, a major expansion is, therefore, required in the port infrastructure sector in the country to handle this sea borne traffic with ever increasing foreign and coastal trade. In order to mobilise substantial resources required for the purpose and in order to improve efficiency, productivity and quality of service as well as to bring in competitiveness in port services, the port sector has been thrown open to private sector participation. Significant level of private sector participation in the development of Indian port sector, since 1996 when the government first initiated the port privatization policy, has brought about a sea change in the Indian maritime sector. Arguably, the level of investments in port sector by private sector participants has since gone up exponentially and what is more significant from the point of view of emergence of port services industry in India is also the new level of performance efficiency benchmarking that is now enabled by growing intra-port as well as inter-port market competition.

