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Apurva Doshi
doshi.apurva@kotak.com
 +91 22 5634 1366

Jay Prakash Sinha
jay.sinha@kotak.com
 +91 22 56341207

Logistics: Helping in wealth creation

Summary

Logistics is the backbone of modern industry and services sector. The growing thrust on infrastructure has further widened the scope of logistics from a mere courier service to overall solution provider. Globalisation of Indian economy, rising export-import activities, people movement has all put the logistics industry in a sweet spot and we observe today that the industry is at an inflection point. It is quite visible from the rising port activities, increasing containerisation, growth in large capacities, commercial vehicles, air cargo, modernisation of roads, ports, airports, railway facilities etc. Growing complexities in sourcing of raw materials and providing goods and services at the doorstep of the user that too at competitive rates has further boosted the prospects of the logistics sector. Needless to say, thrust on agriculture given India's position in most of the agriculture output, has necessitated creation of infrastructure to take care of the perishable nature of such products.

India's logistics industry is all set to take off. Key health indicators suggest that the momentum can be maintained from here on, especially as the industry has become very cost conscious and quality driven. Realising the potential in the outsourced logistics market and the threat arising out of the entry of global Third Party Logistics (3PL) service providers, the Indian logistics service providers are expanding their basket of services, looking beyond storing and transporting products and raw materials and focusing on related services such as customs clearing and forwarding, labeling and packaging, fleet management, light assembly, kitting, repairs & reverse logistics, inventory management, etc.

According to Goldman Sach's study, over the next two decades, India's GDP could touch \$1.4tn i.e. a growth of 4.4% CAGR. India would then be spending around 10% i.e. \$140bn on logistics and related services.

We believe that logistics will be one of the fastest growing businesses going forward and companies like Gateway Distriparks, GATI and Aegis Logistics are well positioned to take advantage of the logistics boom that is going to unfold over the next few years.

Key highlights

- Growing Indian economy
- Faster growth in infrastructure
- Robust growth in export-import trade
- Only 3% of Indian companies invest in logistics and SCM
- World giants are expected to increase their sourcing from India
- Support high growth industries like retail, auto ancillaries, high tech electronics, processed foods among others
- India to become logistic hub of Asia
- Consolidation of service providers

Companies under coverage

- Gateway Distriparks
- Aegis Logistics
- GATI

Summary table

Company Name	CMP (Rs)	Reco	Target (Rs)	Mkt cap Rs.bn	EPS (Rs)			P/E (x)			P/BV (x)			Sales (Rs mn)			Net Profit (Rs mn)		
					2005	2006E	2007E	2005	2006E	2007E	2005	2006E	2007E	2005	2006E	2007E	2005	2006E	2007E
Gateway Distri	260	BUY	271	23.4	5.4	8.7	9.3	48.3	29.9	28.0	11.8	4.0	3.5	937	1,346	1,925	348	700	855
Aegis Logistics	245	BUY	337	4.0	8.0	17.5	25.1	30.3	13.8	9.6	5.3	4.0	2.9	1,205	1,750	2,650	131	280	409
Gati	465	BUY	519	5.8	17.4	21.9	32.0	26.7	21.2	14.5	6.7	5.5	4.1	3,592	4,890	6,215	145	274	401

Source: Capitaline, Kotak Securities -- Private Client Research; Priced as on 14 March 2006

We understand that logistics is going to play a crucial role in the Indian economy going forward for the following reasons:

Shifting from un-organised to organised service industry

The Indian logistics service providers market is mostly unorganised and has a long way to go before it catches up with the world leaders. But since the last few years there has been a change in shippers' perspective vis-a-vis service providers, which has been driving the development of the latter's offerings and business models. Such development is at a nascent stage and the entry of global players would further speed up the changes.

Growing export – import trade

India's export-import (EXIM) trade has grown at an impressive compounded annual growth rate (CAGR) of 13.4% during the last decade driven by the opening up of the country's economy. This has led to a significant opportunity for container handling and transportation from the port to various locations and vice-versa. The government plans to invest \$22bn in the next five years to build, expand and modernise seaports, with locally generated resources. India has the potential to double its container capacity at ports from 6 mn TEUs (Twenty Equivalent Foot Unit) in 2004 to 15.2 mn TEUs in 2012.

Acceptance of logistics and SCM concepts and practices

The improvements in the supply chain and logistics activities is prompting the Indian industry to increasingly adopt logistics and SCM concepts & practices, as this will give them a competitive edge in the market place. This has created a need for a range of logistics & SCM solutions ranging from logistics, supply chain, transportation, material handling, storage, warehousing, IT, inventory management, etc, that will benefit the productivity and efficiency of the entire value chain in the multiple dimensions of customer service, costs, profits and speed.

Outsourcing of logistics function i.e. Third Party Logistics

Outsourcing of the logistics function as a business dynamic is gaining importance across the globe. At present, only 3% of Indian companies are investing in logistics and supply chain management (SCM), thereby offering a huge opportunity for the Indian logistics providers to fill this gap. Increasing number of companies are focusing on their core competencies of manufacturing and services and are looking to reduce their operational costs by outsourcing the hassles of distribution activity to competent service providers. Thus they are increasingly outsourcing their logistics requirements to 3PL (third party logistics) providers.

Logistics cost as % of GDP is high at 13% and is likely to reduce to 10%

The size of the logistics sector globally is \$2tn. The expenditure of US on logistics has grown by 11.5% over last year and currently stands at 8.7% or \$1 trn of its GDP of \$12 trn. In comparison, India with a GDP of around \$691 bn spends 13% of its GDP on logistics. This is higher when compared to an average of 10% in other developing countries and it is likely to come down to 10% of GDP for India. This will be due to higher efficiencies and will not have any adverse impact on the revenue of the listed entities like GATI, GDL, Aegis Logistics etc.

Robust growth in express cargo

The Indian market for express cargo consisting of documents and non-documents shipment is about Rs.45bn; it is growing at a pace of Rs.9bn p.a. and is expected to double its market size in less than five years. This is a multi modal service involving rail, road, sea and air transportation for ensuring on-time and door-to-door delivery.

Major international logistics users setting eye on Indian pie

The success of today's world market leaders such as Wal-Mart, Dell, Cisco, Ikea, Toyota, etc, is primarily due to their superior operational and logistics capabilities. These world giants are expected to increase their sourcing from India from current 5% to around 30% in the next few years, which translates into huge growth potential for the logistic providers in India

Emerging markets provide the greatest scope for Logistics services

India is an emerging market like Laos, Cambodia, Vietnam and Indonesia. Key features of emerging markets are economic reforms with a certain degree of political stability, a relatively high customs duty regime, diverse languages, currency differences, inadequate infrastructure, limited automation, fragmented industry structure, high degree of government regulation, low third party capability, limited Internet usage and a high focus on crisis management. This is where logistics service providers come into the picture. Such providers would come in as essential partners in the supply chain to strengthen the weakest link of the sourcing of raw materials and delivery to the end-user. This is more so in cases where companies do not have the core competence to perform specific activities such as inbound and outbound logistics. The benefits of engaging service providers goes beyond mere cost reduction; service providers dramatically improve a company's supply chain competitiveness by ensuring that its products reach the market on time.

Savings on logistics could be used to fund infrastructure or capacity creation

Worldwide, better Supply Chain Management (SCM) has reduced logistics costs by nearly 1% in 10 years. It leads to savings in cost of sourcing of raw materials and delivery of the products to the end-user. About 60% of the total logistics cost is on transportation and the rest is on packaging, warehousing and handling among others. Since 1991, FDI worth \$23bn has come into India, and of this \$7.66bn has gone into infrastructure. However this is not enough and we need more investment in infrastructure. A 1% reduction in total logistics cost could mean a saving of around \$1.5bn, which could be used for developing infrastructure.

Introduction to logistics

Logistics has assumed tremendous importance in a world where traditional factors of production are being challenged continuously by constraints of time and space. The relentless march of globalisation, economic integration, removal of barriers to business and hyper competition has added yet another dimension to transportation and distribution.

Logistics plays the critical role of transportation of goods from areas of production to areas of consumption

With products being uniform, standardised and commoditised, logistics has become a dominant part of the competitiveness equation. Indeed, only 20% of the world's population can afford 80% of goods and services currently offered. The goods and services will have to be transported to the areas where they are required and logistics has to play the critical role of transportation of goods from areas of production to areas of consumption. Competition is indeed very high since every country and company will be competing to reach these affluent markets. One who has superior logistics capability in terms of delivery schedule in terms of quantity, quality and timely delivery will emerge as the clear beneficiary and will be able to expand its business and overall profitability.

Globalisation, growth of outsourcing of manufacturing and rapid developments in IT has changed the face of the transport and logistics industry, as they have become an integral part of the entire value chain of the economic activities.

Introduction to SCM - Supply Chain Management

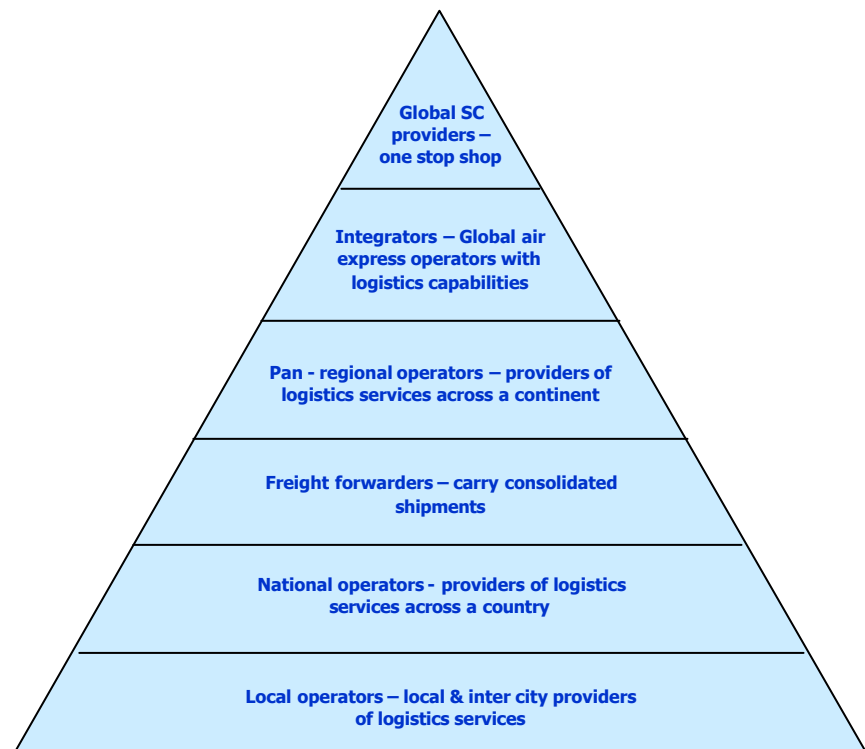
SCM providers take care of the entire delivery schedule of the inputs for the manufacturing of the produce

Within logistics, SCM has assumed greater role in today's world. There are various critical inputs in the process of manufacturing and any disturbance in the delivery schedule of these critical inputs will throw the entire line of production out of gear. This may lead to huge losses for the manufacturing organisations. To avoid disturbance in production schedule we have SCM providers who take care of the entire delivery schedule of the inputs for the manufacturing of the product.

With the knowledge of customer needs and value added services holding the key, the complexity in delivering critical inputs to industries has opened new vistas as well as challenges for SCM and distribution services. Today, development of appropriate supply chain clusters to support the high growth industries is very essential to gain competitive advantage.

The logistics and SCM providers primarily fall into six major categories with the global SCM providers being at the top of the pyramid.

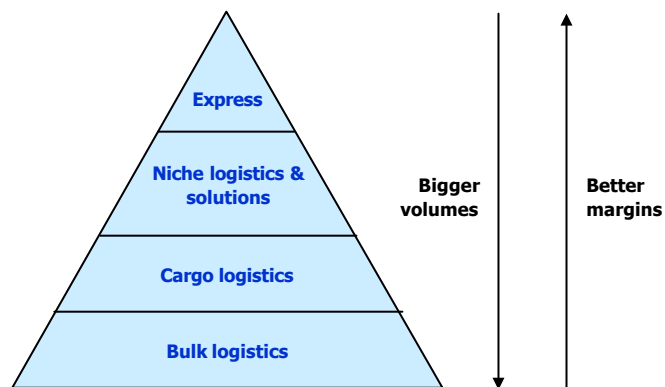
Global SC managers on the top of the hierarchy



Source: SC & Logistics 2005

- Local and inter city operators* On the first level are the local and inter city operators like local and inter city courier companies etc.
- Small-scale operators* On the second level are the small-scale operators who carry out transport across a national territory. They also use multi-modal means of transport to deliver goods across the national boundaries.
- Freight forwarders* On the third level are the freight forwarders who collect shipments and after consolidating them, deliver them to a consignee destination. They do the important work of consolidating small cargos into bulk cargo, which is economical to transport and then deliver it at the designated location.
- Pan-regional operators* On the fourth level are the pan-regional operators who specialise in providing their services in certain geographical regions.
- Integrators* The integrators are slowly emerging as providers of services with logistics and SC capabilities and are thereby consolidating their positions as the world leaders in transportation, e-commerce and SCM services.
- Global SC managers* The global SC managers are the global solution providers taking the task of transportation and distribution off the manufacturers' hands by dealing with all their needs. They are the one stop shop for logistics. They use multi-modal forms of transportation to deliver anything anywhere in the world with their tie-ups all over the world. They specialize in delivery of high value- high importance items anywhere in the world. They carry out their operations efficiently due to their superior logistics capabilities.

Logistics pyramid



Source: SC & Logistics 2005

There are scores of service providers of all kinds, sizes and competencies in India. That's the sign of a market just opening up, and eventually we should see consolidation and the emergence of players with serious size and scale. Only players with superior logistics capabilities will be able to achieve sustained growth for a long period of time.

Every company is trying to move up the pyramid to the sweet spot at the top

The logistics market is a pyramid right now. Every company is trying to move up the pyramid to the sweet spot at the top, because margins are lower at the bottom of the pyramid and can only be expanded to a particular limit. As one goes up the pyramid one gets better margins as it involves greater specialized and personalized services with strict adherence to delivery schedules in terms of quantity, quality and timely delivery of the goods.

Bigger volumes at the bottom the pyramid will lead to thinner margins for bulk logistics companies. As one goes up the value chain in the pyramid to cargo logistics, Niche logistics and eventually to express logistics it leads to lower volumes but better margins.

Scope of activities under logistics and SCM

- 1) Services.
- 2) Hardware.
- 3) Technology.

Services

The logistics services offers solutions & services ranging from third-party logistics, warehousing, distribution, transportation, shipping, consulting, inventory management activities, etc, that will make logistics & supply chain operations of manufacturing, trading & service industry more efficient and competitive.

- 3PL – third party logistics.
- Freight forwarders.
- Shipping lines.
- LSP – logistics service provider.
- Air freight.
- Labeling & packaging solutions.
- Special logistics park.
- Transportation/Fleet operators.
- Warehousing & storage.
- Parts & terminals.
- Express services – Courier.
- Consultancy.
- Project cargo/Bulk cargo/Multi-modal.

Hardware

The logistics hardware comprises storage, warehousing and material handling equipment, systems and technologies that offer productivity solutions in material handling and logistics, for both users and service providers.

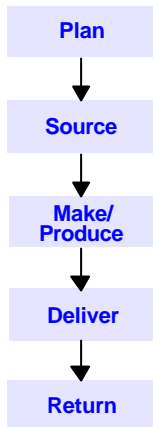
- Forklifts/Stackers.
- Dock leveler.
- Racking systems/Shelving systems.
- Slotted angles.
- Automated storage & retrieval systems (ASRS).
- Scissor lifts/Platforms.
- Pallets.
- Carousels.
- Bins & containers.
- Automated guiding vehicles (AGV).

Technology

Logistics technology comprises technology and solutions, ranging from tracking systems, bar-coding, ADC, AIT, ERP, Enterprise IT Solutions, SCM collaboration software, e-business and WMS to software and telecom solutions, which will give both the users and logistics service providers the competitive edge.

- Tracking Systems – GPS.
- Telematics.
- Automatic Data Capture (ADC) & Barcoding.
- Enterprise IT Solutions ERP/CRM/SCM.
- Software & IT Solutions for Logistics and SCM.
- E-business (e-commerce, e-procurement, e-SCM).

SCM flow



SCM - Supply chain management

SCM is the combination of art and science that goes into improving the way a company finds the raw components it needs to make a product or service, manufactures that product or service and delivers it to customers.

The following are five basic components for supply chain management.

- 1) **Plan** - This is the strategic part of supply chain management. One needs a strategy for managing all the resources that go toward meeting customer demand for a company's product or service. A big piece of planning is developing a set of metrics to monitor the supply chain so that it is efficient, costs less and delivers high quality and value to customers.
- 2) **Source** - Choose the suppliers that will deliver the goods and services that a company needs to create its product or service. Develop a set of pricing, delivery and payment processes with suppliers and create metrics for monitoring and improving the relationships. Also put together processes for managing the inventory of goods and services a company receives from suppliers, including receiving shipments, verifying them, transferring them to the company's manufacturing facilities and authorising supplier payments.
- 3) **Make** - This is the manufacturing step. Schedule the activities necessary for production, testing, packaging and preparation for delivery. As the most metric-intensive portion of the supply chain, measure quality levels, production output and worker productivity.
- 4) **Deliver** - Coordinate the receipt of orders from customers, develop a network of warehouses, pick carriers to deliver products to customers and set up an invoicing system to receive payments.
- 5) **Return** -The problem part of the supply chain. Create a network for receiving defective and excess products back from customers and supporting customers who have problems with delivered products.

SCM is the best strategy to protect margins

Until as late as the mid - 1990s, companies believed that brand management and distribution protected them against competition. The liberalisation programme from 1991 changed the very basis of competition. When practically every avenue of competitive positioning was exhausted, then came the focus on SCM. Now, better SCM is seen as the best strategy for protecting margins.

For India Inc, it has become essential for homegrown service providers to raise their standards of every process — from logistics, to manpower, from training to IT — just to stay in the race. India's supply chain industry is booming and with much the same speed that such rapid expansion brings.

Performance measurement tools and metrics are the key to continuous improvements in supply chain processes and activities

Performance measurement tools and metrics are the key to continuous improvements in supply chain processes and activities. Though there are a wide number of metrics available, choosing those linked to cost, time and quality would help focus attention on key areas for continuous improvement. The key supply chain performance indicators are Cash-to-Cash cycle, Inventory Rotation and Perfect Order Delivery, which are critical indicators of effective supply chain performance. The Balanced Scorecard and the Supply Chain Operations Reference (SCOR) models would help deploy these metrics across the organisation. People coordination is an essential contributor to effective supply chain integration. It involves people from different functions with varying skill set and goals, which could create a conflict if they are not trained as a cross functional team.

Learning curve for both buyers and sellers of logistics services will be steep

There's a bright future for service providers of all kinds in India's burgeoning supply chain management industry. While there remain vast tracts of Indian industry that haven't even started using any formal and systematic service providers, those that have taken the lead in utilising expert services have already realised benefits. A lot will depend on the value proposition that the service providers come up with. The mindset is already changing in favour of service providers, but the learning curve for both buyers and sellers of these services will be steep. There is huge opportunity for growth in the segment of the supply chain industry.

Specialist logistics park

Shared multi-user facility

In a specialist logistics park, a logistics service provider brings in a shared multi-user facility of broadly a similar product range, giving back to the clients pooled and shared expenses while also giving benefits of skilled manpower, better understanding of products and processes and most importantly, scalability.

3PL - Third party logistics

3PL is outsourcing logistics activities to manage complex distribution requirements

More and more organisations worldwide want to develop products for global markets. At the same time, they need to source material globally to be competitive. The solution for this is outsourcing logistics or using 3PL to manage complex distribution requirements.

Organisations have developed strategic alliances with 3PL companies all over the world to manage their logistics operations network. These alliances are also known as logistics or supply chain outsourcing and contract logistics.

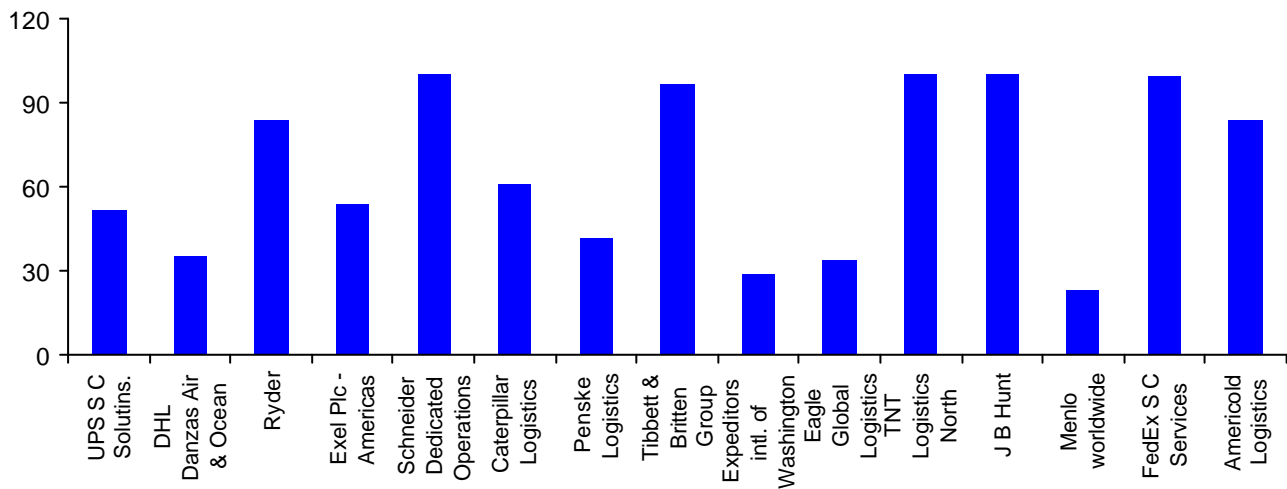
Benefits of 3PL

- **To save time:** Outsourcing the logistics function can free up resources to focus on core competencies.
- **Because someone else can do it better:** Even if you have resources available, another organisation within the supply chain may be able to do it better, simply because of its relative position in the supply chain, supply chain expertise and economies of scale.
- **To share responsibility:** 3PL companies can share responsibility for managing global supply chains, keeping customers and stores properly stocked, and delivering the perfect order every time.
- **To re-engineer distribution networks:** Logistics outsourcing can be a quick way to re-engineer distribution networks to meet global market demands and gain a competitive edge.

Global market for 3PL

The global market of 3PL service providers is estimated at over \$70bn. North America - based service providers account for well over \$50bn, of this \$70bn.

Net Logistics revenue as a % of gross logistics revenue



Source: Armstrong & Associates Data – 3Plogistics.com

US is one of the two large markets in the world for using 3PL services.

Global 3PL examples

- FedEx* ■ FedEx Express was given the responsibility of transportation of 630 tons of 504,000 bottles of 2004 Beaujolais Nouveau wine to Japan. It specially operated 7 FedEx charter flights to transport the famous wine, making it the largest shipper of the distribution from Lyon, France.
- DHL* ■ Talbots, a leading specialty retailer and e-tailer of women's classic apparel, shoes and accessories, chose DHL@home business-to-consumer delivery service for a substantial portion of its US print and online catalog sales. In choosing DHL, Talbots identified an opportunity to reduce home delivery times on ground shipments from the company's distribution centre to west coast from six to four, while safeguarding Talbots' unconditional customer guarantee. With over 10,000 shipments a day, ensuring the excellent service for which Talbots is renowned, is vital to the company's bottomline.
- Exel* ■ The British manufacturing sites of Bayer Diagnostics, part of the worldwide Bayer AG group, required a logistics partner that could provide time-defined transportation service for its temperature controlled range of blood testing diagnostic equipments. Exel provides a time-defined airfreight export service, from the UK to destinations worldwide. Shipments that are temperature controlled are all shipped on direct IATA flights due to their nature, whilst non-restrictive products are moved on Exel's airfreight consolidation service. Exel collects all restricted cargo on its day of readiness and depending on the destination and transit time involved, delivers between 24 and 48 hours later. Exel ships in excess of 1,500 shipments per annum for Bayer Diagnostics, with consignments varying from 1 kg up to 2,000 kg.

Some of the international logistics companies that have been wealth creators

Wealth creators

- **UPS:** Founded in 1907 as a messenger company in the United States, UPS has grown into a \$36bn corporation.
- **DHL:** Founded in 1969, by three friends. Today, its revenues are \$30bn with over 170,000 employees servicing more than 220 countries and territories and 4.2 mn customers.
- **TNT:** Started in 1946 as Thomas Nationwide Transport in Australia, revenues of \$12.6bn today.
- **FedEx:** Started in 1913, FedEx has revenues of \$24.7bn and operates in 215 countries handling 3.1 mn packages daily with 240,000 employees.

Source: SC & Logistics 2005

The growth of the 3PL industry depends heavily on companies outsourcing non-core activities to logistics service providers who handle it better. A major chunk of outsourcing relates to warehousing and transportation. Though outsourcing has been around for a decade, it was in 2002 that it got recognition, and in 2004 the concept expanded to areas like inventory management, invoicing and order processing. But even today the level of effectiveness of logistics service providers is not satisfactory due to low levels of service quality. In future, the logistics service providers that can offer good service quality will stand to gain at the expense of current low service quality providers.

Warehouse

Warehouses are becoming sort and merge facilities

The warehousing and distribution functions are moving away from mega distribution centres to a hybrid warehousing model, large regional and smaller forward stocking points, deliveries being made bypassing distribution centres, delivery directly to the customer, cross docking to improve turnaround of assets and consolidation of the goods in transit. Changing the role of warehousing from inventory repositories, warehouses are becoming 'sort and merge' facilities. The inventory in a warehouse is en route to delivery. A significant amount of the work done in warehouses is being outsourced. The warehouse is viewed as a fixed asset, apportioned across available amount of inventory. Warehouse Service Providers have begun playing an active role in Supply Chain Management. The purpose of a warehouse is to maximise value addition and minimise value erosion. Consolidation, break bulk/cross dock/procession/postponement, and value added services are the benefits of warehouses.

Warehouse operators have begun playing an active role in supply chain management

Retaining of trained resources is progressively becoming a key issue today. A 3PL model coupled with professional management proved to be a better bet than owning or outsourcing the warehouse. The current trend that of moving away from mega distribution centres to a hybrid-warehousing model. Delivery now happens through mainly bypassing the distribution centre. Warehouse operators have begun playing an active role in supply chain management. The outsourcing trend in warehousing has begun to gain momentum though 70% of the warehousing is still in-house. Barriers for investment in warehousing include duration of the contracts, exit clause, location based on the tax optimisation v/s supply chain need, own systems v/s 3PLs.

India & China - service providers

Outsourced logistics services in China are growing by about 25% per year

As per a study by Mercer Consulting (Diana Huang and Mark Kadar), China's 3PL market size is around \$4.7bn, while India's is estimated at around \$300mn. Compared to overall logistics services, which are growing by about 7.5% annually, outsourced logistics services in China are reported to be growing by about 25% per year, leading both North America (10-15% annual 3PL growth) and the rest of the world (5-10%). In fact, several of the most promising logistics service providers in the Chinese market have experienced annual doubling of revenues in the past couple of years.

FedEx currently operates six flights a week from India as compared to 23 from China, which clearly demonstrates the difference in investments and overall market size of both countries. China focused on the manufacturing sector much before India, while India focused on the IT sector. We now see India focusing on the manufacturing side and it has a huge growth potential in the coming years.

Market size and estimates

India spends approx 13% of \$691bn GDP on logistics

The Indian express logistics and SCM industry is a booming industry today. India today spends approx 13% of \$691bn GDP on logistics which translates into logistics spend of Rs.4tn. Transportation itself is more than Rs.1.5tn industry with surface transportation alone accounting for over Rs.1tn. 3PL and warehousing management is growing rapidly and will add on another substantial amount. The Indian express logistics segment is already worth around Rs.45bn and the increasing demand is evident from the fact that global giants have recently set shop in India.

Global estimates for the logistics spend

China spends around 13% of its GDP while US spends less than 10% of its GDP on logistics. This is an estimate or an indicator of spends by various sectors in an economy on logistics and supply chain, which includes transportation, inventory, financing among others.

Unlisted logistics companies account for at least 50% of the overall industry size

There are many unlisted companies in the logistics industry. The number of unlisted companies varies from segment to segment. For example, the greater number of unlisted companies are in trucking, courier, express and warehousing. Shipping has the least number of unlisted companies. It's difficult to arrive at estimate of these unlisted logistics companies but they account for at least 50% of the overall industry size. For example, in the express segment FEDEX, United Parcel Service (UPS) and DHL are all unlisted and these would account for upwards of Rs.5bn a year in revenues. Blue Dart, which was acquired by DHL, had revenues of Rs.4.58bn in FY05. It is estimated that Safe Express derives revenues of Rs.3bn plus while AFL makes revenues of more than Rs.5bn (Source: SC & Logistics 2005).

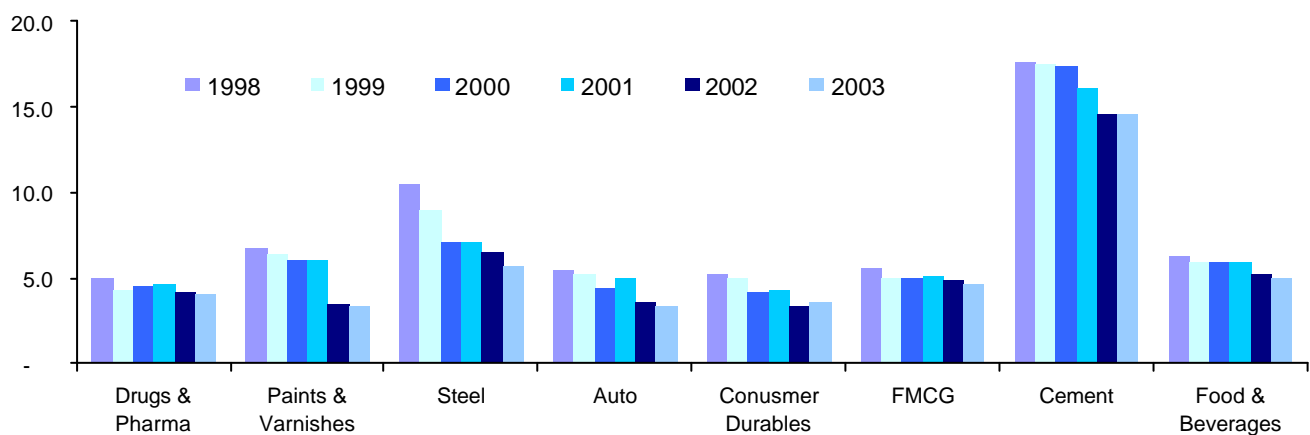
Fortunes of the logistics and SCM market are linked to the growth of the industry and economy

The fortunes of the logistics and SCM market are inextricably linked to the growth of the industry and economy. As the GDP grows the demand for goods increases which in turn leads to transportation of goods from areas of production to the areas of consumption. India's GDP has been growing handsomely which has driven growth in the logistics industry as well.

According to Goldman Sach's economy study, over the next two decades, India's GDP could touch \$1.411tn i.e. a growth of 4.4% CAGR. India would then be spending approximately 10% i.e. \$140bn on logistics and related services.

Based on the industry opinion and our interaction with them, we believe that India's express industry is expected to grow at a healthy rate of about 20% in the next few years and is expected to reach Rs.62.03bn by FY08.

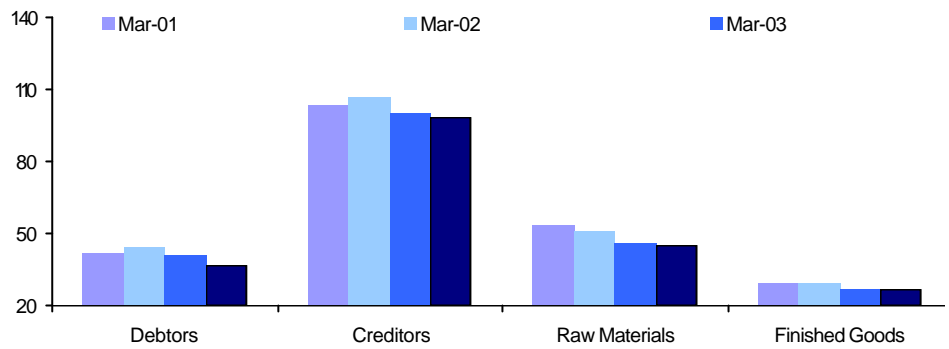
Logistics costs as % of net sales



Source: CMIE prowess

We see that logistics cost as a percentage of net sales is reducing consistently over the years for all the sectors. The companies have realized the role played by third party logistics service providers who give specialized services and thereby help to reduce overall cost of logistics that is inbound and outbound distribution costs as percentage of net sales. This is true across industries as is clearly visible from the above graph.

Overall SCM data for mfg. companies (avg. no of days)



Source: CMIE prowess, S C & Logistics 2005

Good SCM practices to lead to negative working capital

With the fall in the proportion of logistics cost in net sales there is improvement in several other parameters like debtors, creditors, raw materials and finished goods, (which includes the flow of material, money and information), which results in the net working capital going negative (companies pay their suppliers much after they collect their money from the buyers) for many companies. The FMCG sector is the leader where the fall in the proportion of logistics cost to net sales has led to negative working capital. This allows for much better cash flows, investments, margin protection and dividend yields. Having and maintaining a negative working capital is a good practice in business and one of the key objectives of a good supply chain. Managing raw materials inventory is critical. If one can ensure just in time inventory then one can save a lot of inbound logistics cost on the raw materials. Using logistics management one can ensure timely delivery at the required areas and thus maintain optimum inventory of finished goods, which lead to savings in finished goods inventory carrying costs. Reducing debtor days means one can convert debtors into cash much faster and thereby make cash available for the working capital cycle.

In order to understand the logistics cost we analyse logistics spends on a few clear logistics aspects: distribution costs, inventory and inventory holding costs- all as a percentage of net sales. Following are the workings of the same.

Distribution costs as % of net sales

There are two parts to distribution costs

- Outbound - Primary distribution is from the factory to the depots of clearing and forwarding agent and secondary is from the depot to the distributor and retailer.
- Inbound - the money spent on transportation of raw materials to bring them to the factory

Typically volume is greater in primary transport, break bulk happens at depot and volume per consignment falls in secondary transport. The trend for last few years is that distribution costs have fallen for most companies.

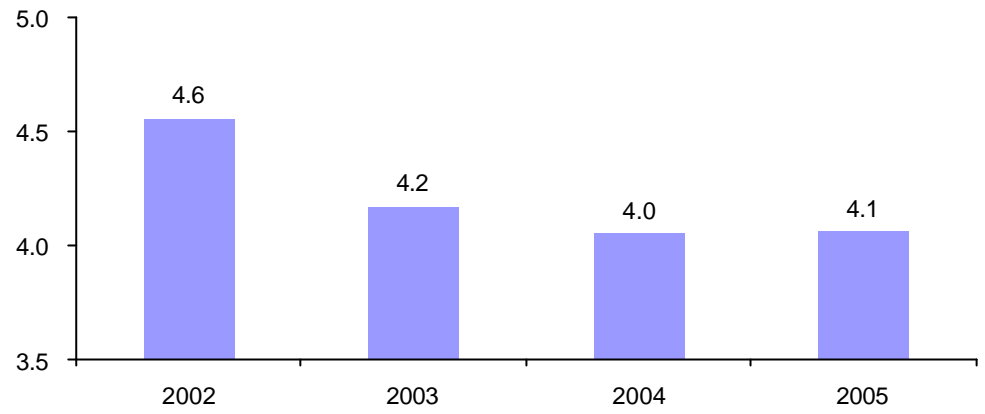
India Inc spends nearly 3% of net sales on outbound distribution costs

India Inc spends nearly 3% of net sales on distribution. For many companies, distribution costs consist of mainly outbound distribution, which includes not only transportation costs, but also insurance, damages, repairs among others.

On an average, India Inc spends 1.4% of net sales on inbound transportation costs.

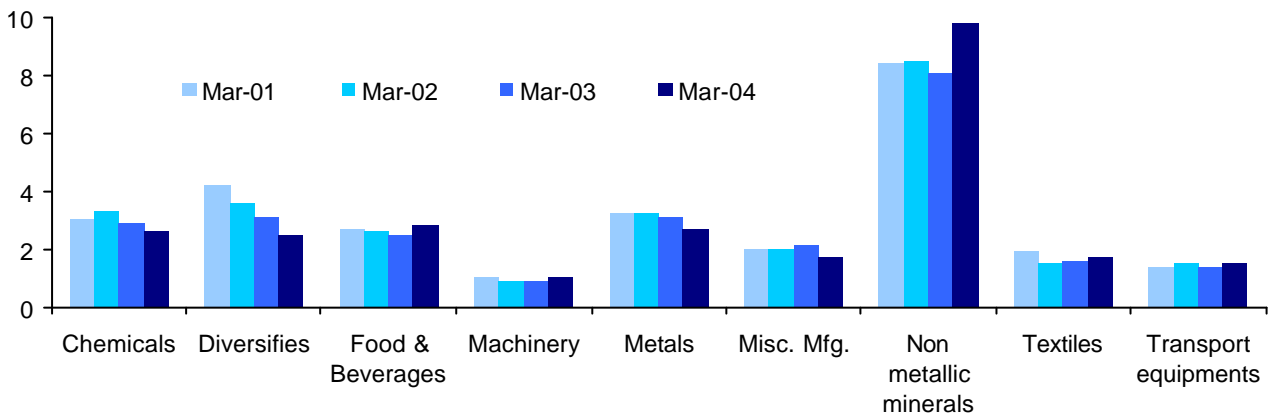
Combining outbound and inbound, an estimation of transportation costs would be around 4.1% of net sales for the year ended March 2005. This has come down from the 4.6% in March 2002. Courier expenses are not included in the above; as we believe that these are clubbed with administrative expenses or are a small part of the outbound logistics cost. As we recognize the role of third party logistics service providers the total transportation cost as percentage of net sales is expected to come down further in coming years.

Total transportation costs as a % of net sales trend for 9 mfg industries



Source: CMIE Prowess, ETIG analysis; www.etintelligence.com

Distribution cost as a % of net sales of various industries



Source: CMIE prowess, S C & Logistics 2005

Both sales value and number of units have increased over the past four years, so has the complexity, speed and variety of modes and most importantly, the cost of distribution. The ratio of distribution cost to net sales has fallen for many industries due to :

- The companies using existing distribution channels much more efficiently thereby increasing throughput and decreasing the cost per unit.
- The companies are exploring new avenues for point of sales that is Internet, large retailers, direct deliveries, etc.
- The companies are bargaining for bulk business rates and are getting them.
- Better and larger trucks along with good roads have reduced the cost per unit transported.

Logistics: Multi-modal means of transport

The transportation cost accounts for nearly 4% of the net sales of the companies, with more than half the goods in India being moved by road. Trucking accounts for nearly 70% of transportation and accounts for 60% of all logistics costs. Rail and coastal shipping follow next. Railway, a leader till the 1970s, has been steadily losing ground due to myopic government strategies and inherent inefficiencies. Air as a mode is limited to a small percentage of courier shipments.

The transportation of goods takes place by any one or a combination of the following modes:

- Road
- Railways
- Sea
- Air

Roads

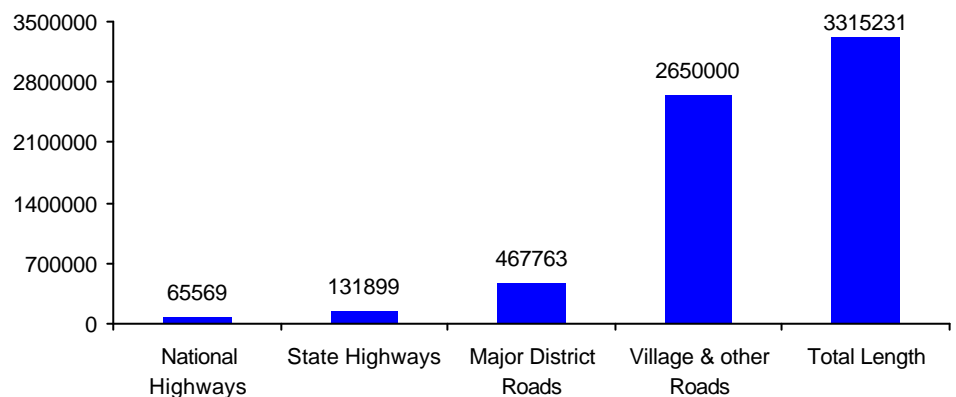
Today, as per NHAI, 85% of all goods move on roads, up from 70% five years ago.

Golden quadrilateral project to lead to efficient transportation of goods by roads

The road network is expanding with the Golden Quadrilateral project linking the four metros on its way. In places where some part of the golden quadrilateral project is already in use, the impact on transport has been very positive. Large tonnage trucks are able to move faster. Average speeds have risen from 33 km/hr in heavy traffic regions like Gujarat and Maharashtra to 35-40 km/hr. Average loading has increased as well, and transit times have fallen but the monsoon still can play havoc on the road logistics.

Major policy initiatives have been taken by the government to attract foreign as well as domestic private investments. To promote involvement of the private sector in construction and maintenance of national highways, some projects are offered on build, operate and transfer (BOT) basis to private agencies. After the concession period, which can range up to 30 years, the roads are to be transferred back to NHAI by the concessionaries. The prestigious Golden quadrilateral project is of Rs. 580 bn.

Indian Road Network Length - km - 2004



Source: NHAI

Some key statistics

- Though national highways are less than 2% of total road network they carry approx. 40% of the total traffic.
- The number of road accidents fell from 78,911 fatalities in 2,000 to 61,045 deaths in 2002-03 indicating improvement in road transport.
- The total vehicle fleet has grown from 0.3 mn to 12.5 mn between 1951 and 1998.
- Trucking fleet registrations have increased 32 times from 82,000 in 1951 to 2.64 mn in 2000.
- The road sectors' share of freight traffic has increased from 11% in 1950 to approx 85% currently.
- Freight per ton per km and charges per passenger per km by road grew by 12% and 8.4% per year respectively during the 1990s.
- Only 2% of national highways are four – lane roads.
- Approx 80 - 90% of the national and state highways are suitable for a standard axle load of 8.16 tons and are not structurally adequate for the permissible axle loads of 10.2 tons. (Source: World Bank, SC & Logistics 2005)

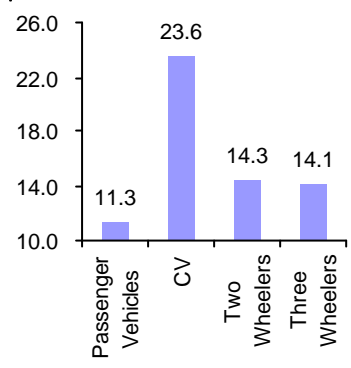
Booming medium and HCV segment

Domestic sales of commercial vehicles have grown at CAGR of 23.6% over the last four years, which shows that the transportation of goods and services is increasing at a rapid pace. In 2002, LCVs dominated in terms of sales and usage. But now the greatest spurt in sales is actually happening in the 26 - 35 tons segment. This implies more and more goods are being transported across the country from the areas of production to the areas of consumption. A few years back, HCVs used to be few and far between and ran for private purposes, not really open to all users. Now the medium and HCV segment is booming. A drive down the Mumbai - Pune expressway reveals many Volvos and Tata 16 tonners on the move.

Better roads to lead to lower cost of transportation per ton

The per unit cost of logistics is directly influenced by the quality of road infrastructure, i.e., better the roads, lower the cost per ton.

CAGR of Domestic Automobile Sales Trend from FY01 to FY05 (%)



Source: SIAM

Sea traffic is expected to carry 95% of India's exports

Source: SIAM

Waterways is the energy efficient mode of transport

Sea: Shipping, ports and containers

Sea traffic is expected to carry 95% of India's exports and so ports are very critical for handling the goods, planning for expansion and linking seamlessly to production centres across India. India may produce world-class goods in many industries, but these goods have to reach their markets where they are in demand. And these days, geographical distances are no excuses for not supplying in time. This is where ports play a key role. Ideally, ports should be the gateway and not the guardhouse or toll collection point thus ensuring faster evacuation of the cargo.

The search for reliable, combined transport solutions underscores the importance of sound multimodal infrastructure. Soaring oil prices, fuelled by Chinese demand and concerns about future tightness of supplies, have accelerated the demand for energy-efficient modes. In areas with navigable waterways, inland shipping becomes very significant. Barge transport is known for its cost efficiency and reliability.

With transport volumes expanding more rapidly than the GDP, and the road and rail network suffering from chronic congestion, waterways is a feasible option as it combines efficiency with sustainability.

Ports play a vital role in the supply chain of most exporters from India. Ports have to get the ships in, clear them out and dispatch them loaded as fast as possible. Pre-berthing time, or the time a ship has to wait to get a berth in the port, and the turnaround time, a measure of the efficiency of the port in operations, are two key parameters keenly tracked by industry for it has direct implications on everything from planning to inventories.

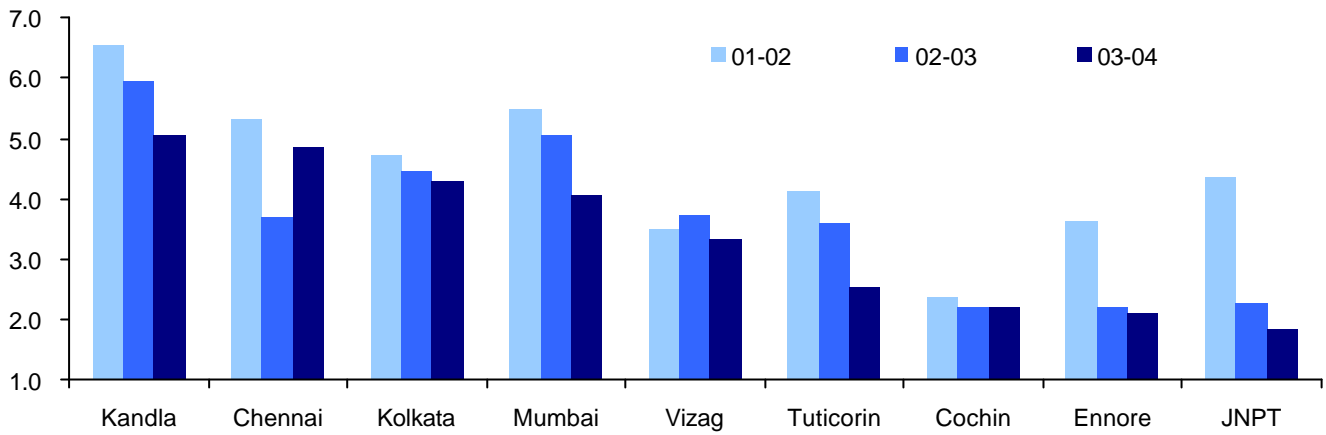
India accounts for just 1% of world cargo and 5-6% of Asian cargo

Ten container ports in Asia, including Singapore, Malaysia and Dubai, now handle over 40% of world traffic. Of the total volume of containerised cargo movement globally, over 50% is from Asia. Five Asian ports handle 23% of global container traffic. Twenty – six per cent of global containerised trade is intra-Asia. As opposed to the growth of 3.5 – 4% in global trade, India has been registering a 10.4% growth in containerised cargo and a 6% growth in bulk cargo. India's 3.9 mn TEUs in FY05 is expected to grow to 4.4 mn TEUs in FY06 but still accounts for just 1% of the world cargo and 5-6% in Asia.

Domestic automobile sales trend (Nos)

	FY01	FY02	FY03	FY04	FY05
Passenger vehicles	690,560	675,116	707,198	902,096	1,061,290
CV	136,585	146,671	190,682	260,114	318,438
Two wheelers	3,634,378	4,203,725	4,812,126	5,364,249	6,208,860
Three wheelers	181,899	200,276	231,529	284,078	307,887

Average turnaround time at Indian ports (days)



Source: Ministry of Shipping: Economic Survey 2003-2004

The turnaround time in days at the Indian ports has come down from 3.7 days in 02-03 to 3.4 days in 04-05

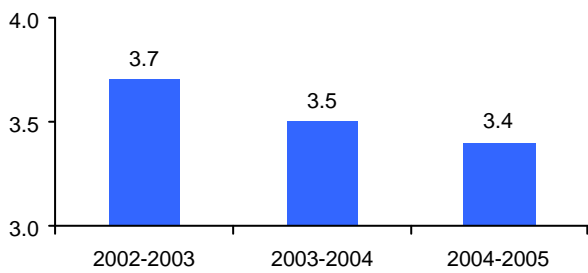
The average turnaround time for ships docking at most of the key ports in India has been falling for the past three years. The turnaround time in days at the Indian ports has come down from 3.7 days in 2002-03 to 3.4 days in 2004-05. This was achieved due to faster evacuation of the cargo from the ship thus reducing the time of docking at the port. The Economic Survey 2003-04 of the Ministry of Shipping has also revealed the following progress:

The pre-berthing time in days at the Indian ports has come down from 6.9 days in 2002-03 to 5 days in 2003-04.

The average output per ship berth per day at the Indian ports has increased from 8455 tons in 2002-03 to 8978 tons in 2003-04.

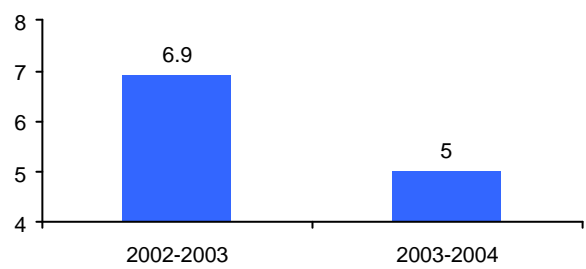
The total cargo handled at the Indian ports has increased from 314 mn tons in 2002-03 to 384 mn tons in 2004-05.

Turnaround time (days)



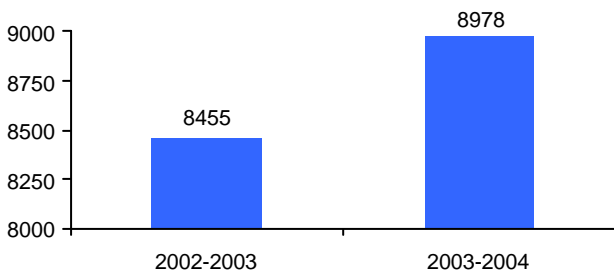
Source: Ministry of Shipping: Economic Survey 2003-2004, SC and Logistics 2005

Pre-berthing time (days)



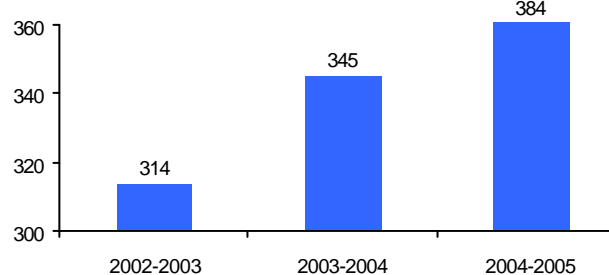
Source: Ministry of Shipping: Economic Survey 2003-2004

Avg output per ship berth per day (Tons)



Source: Ministry of Shipping: Economic Survey 2003-2004

Cargo handled (mn tons)



Source: Ministry of Shipping: Economic Survey 2003-2004

Key statistics

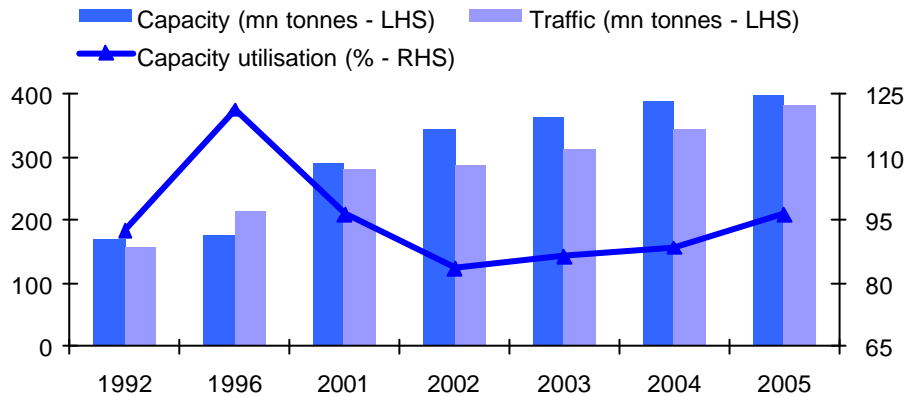
India has

- Twelve major ports.
- One hundred and eighty five minor ports.
- Eighty customs notified ports.
- Seventy five per cent of the traffic is by major ports.
- India ranks 21st in the container traffic in the world.
- About 45% of Indian containers get trans-shipped at foreign ports (Colombo 15%, Singapore / Port Kland 16%, rest 14%).
- The ports spend approx Rs.8bn p.a. on infrastructure; Rs.40bn worth of private sector investment stands approved.

Total traffic in tons has grown at a CAGR of 6.9% from 1991 to 2005

There has been tremendous progress in ports' handling capacity over the last decade. The total traffic in tons has grown at a CAGR of 6.9% from 1991 to 2005. This trend is expected to continue and in fact total traffic is likely to grow at a rapid pace with GDP growth expected to be around 8%.

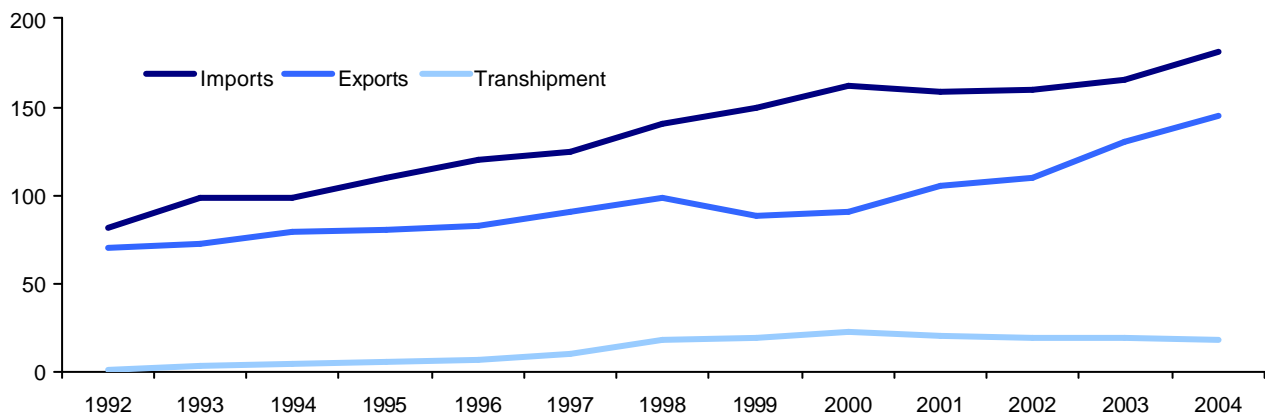
Capacity and traffic at major ports



Source: Department of Shipping

Import traffic at major ports has grown at a faster pace than exports. While imports grew at 6.9% CAGR from 1992 to 2004, exports grew at 6.6% CAGR over the same period.

Traffic at major ports in India



Source: Ministry of Shipping: Economic Survey 2003-2004

JNPT was jammed to the brim with containers in most of 2004 & 2005

The ports need to be fed by a network of air and road. A port is a large-scale consolidation hub and is expected to receive many thousand tons and containers of all kinds in a very short period of time. There are two aspects to port connectivity: the speed at which the goods reach the port and leave it and the ease of reaching it. With connectivity, internal operations need to be improved as well. In most of 2004 and 2005, JNPT (one of the largest ports in India), was jammed to the brim with containers and the scene will be grimmer if next few years' projections are reached.

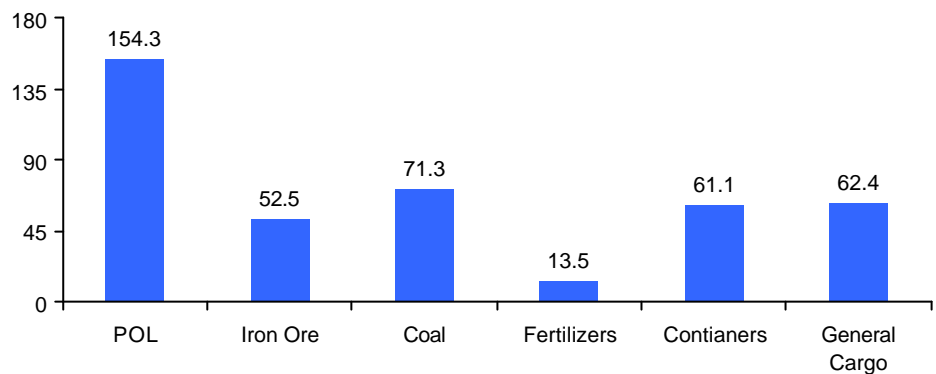
berth capacity will likely come under strain in the near future

The berth capacity is likely come under strain in the near future, and current capacity is not be perfectly allocated across ports to meet demand in each area. The government of India has steadily increased ports' capacity over the past decade faster than traffic has increased. Capacity at the beginning of the Ninth Plan was 220 mn tons, to which the Ninth Plan added 124 mn tons, and the Tenth Plan will add 126 mn tons for an expected capacity of 415 mn tons by 2007.

The government has set India's target as 1% of global trade, which is double from what it is at present. The projections are for 415 mn tons by 2006-07.

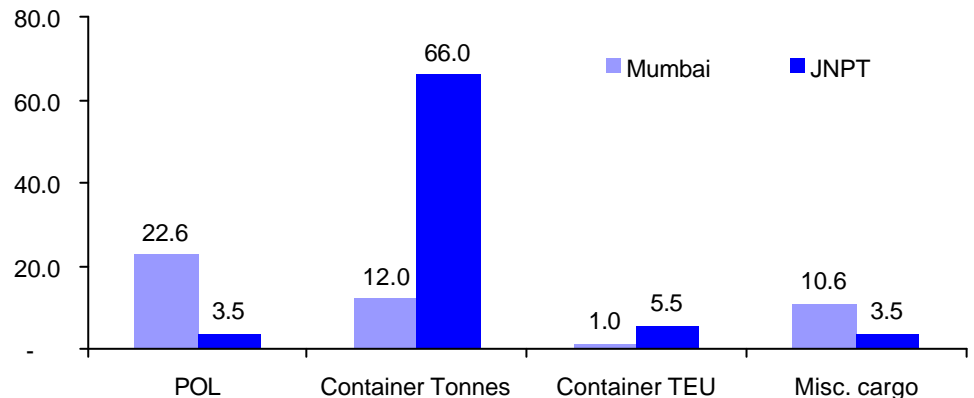
Port Traffic Projections 2006-07 (mn tons)

Indian ports are expected to handle 415mn tons of cargo in 2006-07



Source: Ministry of Shipping

Traffic projections (Mn tons) – Broad Category 2013–2014



Source: National Maritime Development Programme

Expansion plans of JNPT & NSICT

JNPT & NSICT together handle 58.16% of India's overall containerised cargo

Jawaharlal Nehru Port Trust (JNPT) and Nhava Sheva International Container Terminal (NSICT) together handle 58.16% of India's overall containerised cargo. This is further expected to increase following a license agreement with Gateway Terminals India Pvt. Ltd (a JV of Maersk and Concor), for operation of a third container terminal on BOT basis. JNPT has also initiated the process of developing fourth and fifth box terminals by 2016 and 2020 at a cost of Rs. 15bn each. JNPT is also planning a near trebling of its capacity by 2013-2014, from 33.1 mn tons to 94.9 mn tons at a cost of Rs. 158.77bn while MBPT (Mumbai Port Trust) proposes to augment its capacity from 40.4 mn tons to 58.76 mn tons in the same period at a total investment of Rs. 19.48bn.

Development of second box terminal at Chennai port

Chennai Container Terminal is likely to touch 1 mn TEUs in the next couple of years

The second terminal at Chennai port would provide the traders an alternative to the existing private terminal operated by the Chennai Container Terminal (CCT), which is likely to touch 1 mn TEUs in the next couple of years. This will help to decongest the port and also it can handle additional traffic at the port. In FY05, CCT handled 615,000 TEUs.

India needs an all-weather, multi-purpose, deep draft port, which would be required to accommodate 6th and 7th generation vessels, with capacities exceeding 6,000 TEUs and upto 72,000 tons. With most new ships under construction having drafts in excess of 15 mts both MBPT and JNPT will be affected as they have drafts of 10 mts and 11.5 mts respectively.

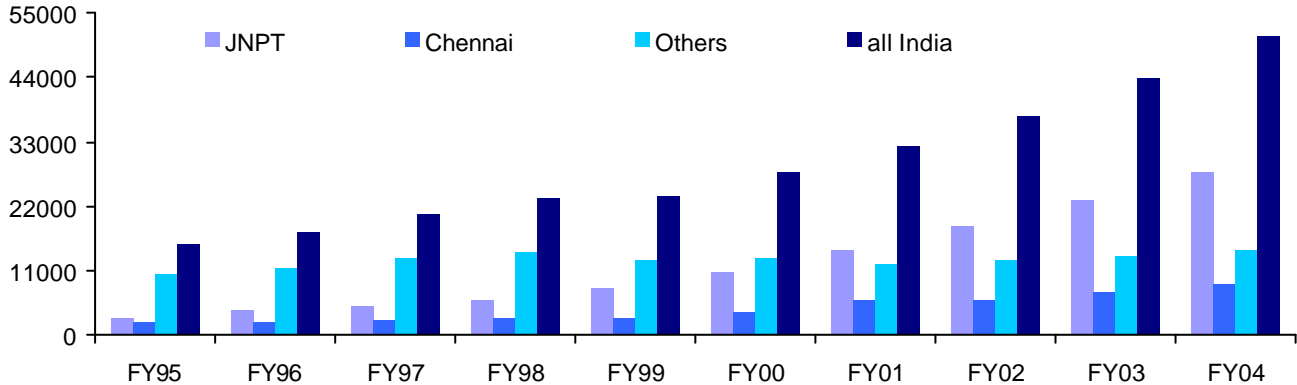
Containerisation

Containerisation is the method of packing goods in reusable containers of uniform shape and size for transportation. Goods are normally of different shapes and in different quantities, but when packed and shipped in containers, they can be handled as a single piece thus making them a lot easier to manage and transport. Before containerisation, handling and transport of cargo was done piece by piece and was hence time consuming. With the arrival of containerisation, shippers started stuffing their goods into containers and delivered them to the port container yard for shipment leading to quicker turnaround times for container vessels. Containerisation also enables intermodal transport, i.e. the total movement from the origin to the destination, using different modes en route like roadways, railways, shipping and airlines.

Standardisation of containers has promoted a mechanised form of cargo handling

Containers come in different types and shapes. The standard lengths are 10 ft, 20 ft, 30 ft, 40 ft and 45 ft but the most commonly used containers are 20 ft and 40 ft containers. Standardisation of containers has promoted a mechanised form of cargo handling. Ease of handling cargo in the containerised form shifted the focus from disparate transport activities towards a transportation chain.

Container traffic at major ports in India ('000 tons)



Source: Indian Ports Association

Containers facilitates intermodal transportation of goods

A lot of retailers opt for door delivery even of commodities like sugar and grains. It is the container that allows for intermodal transportation – the movement of goods using different modes of transport without the necessity of unloading and reloading – with a sealed container leaving a factory in Asia and being delivered to a US warehouse without ever being opened.

Indian ports have been seeing many hitherto break bulk cargoes like rice, maize, glass, granite, garnet sand, soya, cement and flowers now moving in containers. Some break-bulk cargoes such as banana, cotton and green coffee beans have become permanent container fixtures, while others such as pulp, lumber, cocoa and onions migrate from container to ship holds and back to containers, according to the rise and fall of box rates.

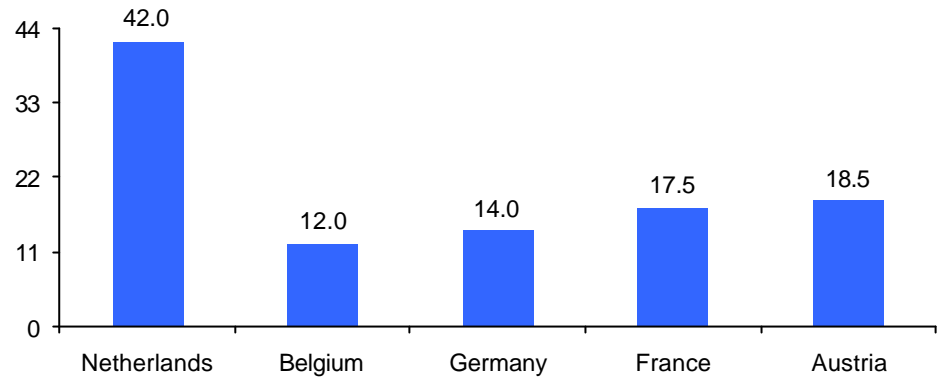
Liquid cargo handling is also possible through containers

Recently an exporter successfully exported iron ore from Chennai to China in containers. Liquid cargo handling is also possible given the example of palm oil containers at Port Klang. All this points to a slow but sure move towards containerisation for value added benefits, and the beneficiary would be the container shipping industry and container terminals.

Inland shipping

In a country blessed with rivers crisscrossing the land, inland waterways have remained surprisingly underdeveloped. Over 20 years ago, the importance of inland waterways as an alternative to road and railways was identified by the National Transport Policy Committee. However, two decades down only three waterways have been declared as national waterways.

Percentage of inland shipping of total cargo handled



Source: *inlandnavigation.org*

India can learn a lot from the ports in Europe. Every country in Europe, which has lots of waterways, has a significant chunk of its cargo taken by inland shipping. Antwerp and Rotterdam in the Netherlands move upto 50% of their cargo through inland shipping, which are seamlessly connected to the ports. This is very efficient mode of transport. India has the potential to effectively use waterways as means of inland shipping to transport containers from the port to the other locations across the country.

Railways

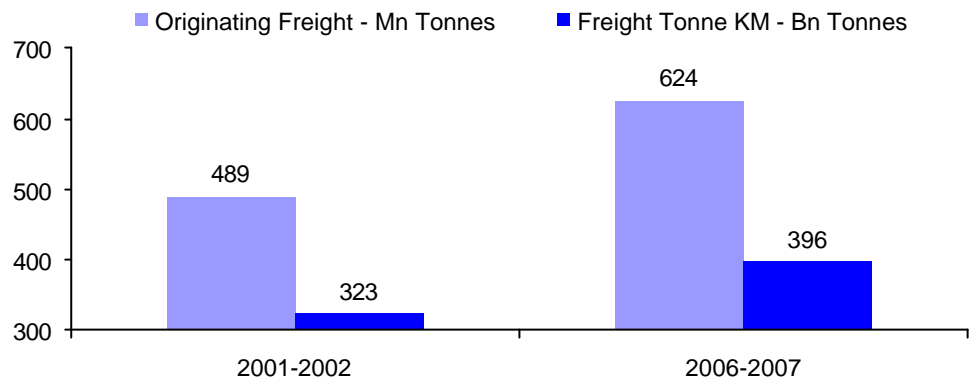
Railways have been losing their share of freight to road

The railways have been losing their share of freight to road consistently over the past 20-30 years, mainly due to the relative inflexibility of train movement. Until the formation of inland container depots (ICDs) in 1900s it was extremely difficult to load goods onto the wagons: most companies needed sidings, which would be expensive. Today, ICDs have made exports and imports easier and Concor, the monopolistic multi modal provider, has done a good job of linking the ICDs to the ports. Overall rail movement remains cumbersome for most except some materials like coal and steel.

Its a seller market in transport of containerised cargo by rail

Wagons have been the bane of the railways for many years. They have simply not been enough to ferry cargo seamlessly. Contrast this to the nearly 3 mn trucks and cargo carriers that exist on India's roads. In road transport it's a buyer's market whereas in rail it is quite the opposite.

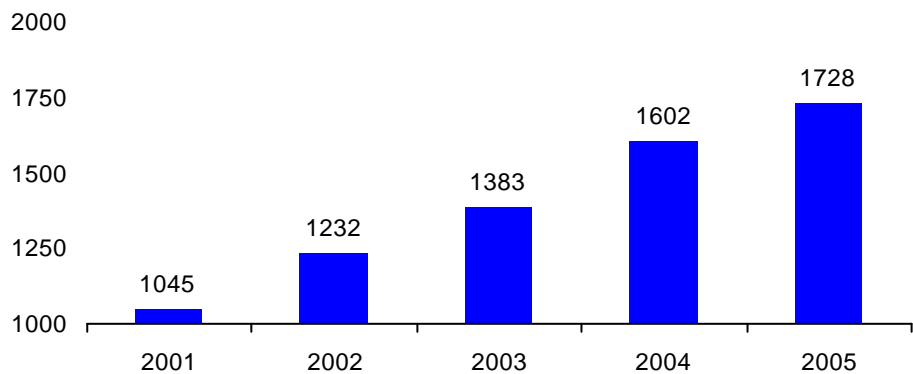
Rail freight traffic projections



Source: *indiastat.com*

The rail traffic is growing and is expected to touch 624 mn tons in 2006-2007 from 489 mn tons in 2001-2002. Similarly freight tonne Kms are also expected to increase from 323 bn tons in 2001-2002 to 396 bn tons in 2006-2007.

TEUs handled - Concor ('000)



Source: *Capitaline*

The TEUs handled by Concor have increased at a CAGR of 13.4% from 2001 to 2005 signifying the growth potential for the container handling business. With the opening up of the economy and buoyant trade this is slated to grow further. There is expected to be huge demand for the handling of additional TEU's which would require additional capacities to be created for the handling of containerised cargo.

Robust growth in TEUs handled by Concor at CAGR of 13.4%

Indian Railways opens up container operations

The Indian Railways has allowed private and public sector players to enter the segment of transportation of containerised cargo by rail. Concor had a monopoly in this segment thus far.

Key points of the policy

- The permission to transport export-import and domestic container traffic be granted for 20 years, which can further be extended by 10 years.
- The applying companies need to have net-worth or annual turnover of Rs.1bn.
- The applying companies can take route specific / all route permits. The Delhi / Mumbai section encompasses the all route permit, which will cost Rs.500mn; operating on other specified route categories to cost Rs.100mn.
- The operating company would have to pay Indian Railways Rs. 12,000 as haulage charges per container on Delhi - Mumbai route, but it will be allowed to freely decide the tariff levels for rail haulage, terminal handling and ground rent to its customers.
- The operating companies will be required to procure flat wagons themselves for transporting containers whereas Indian Railways would provide the locomotives.
- The companies will have to make their own arrangements for a rail linked Inland Container Depot (ICD). They could either build their own facility or lease it from other companies. At present only three companies have such rail linked ICD facilities.
 - a) Container Corporation of India (CONCOR)
 - b) Central Warehousing Corporation, and
 - c) Gateway Distriparks Ltd (private sector player).

Aviation

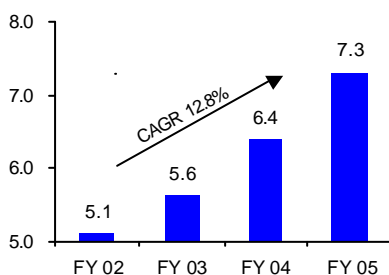
Essential for time sensitive industries

Aviation holds a small but significant value share of India's freight market. Emerging industries like telecom, servers, ITES, BPO, gems, hi-tech electronics and fashion have all developed faster and better than ever before and are using air logistics much more as they are highly time sensitive industries. India is also serving many markets like in the Middle East and Asia more than in the 1990s, which began to show up in the cargo movements.

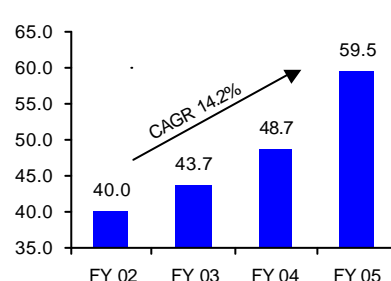
Connectivity to the hinterland of India will spur traffic and freight growth

A lot of liberalisation has also occurred since 2002. Private airlines have taken off: newer airports have been linked by low cost regional airlines, which opened up the passenger traffic, but more importantly, provided vendors and industry in those non-metro cities a gateway to the world. Any connectivity to the hinterland of India can only spur traffic and freight growth and that's good news for the logistics industry.

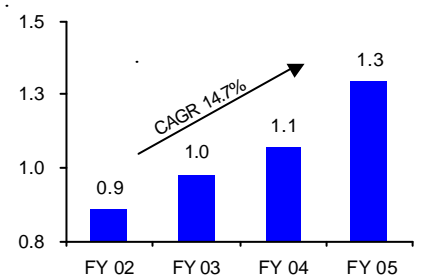
Aircraft movements (lakhs)



Passenger movements (mn)



Cargo movements (mn tones)



Source: Ministry of Civil Aviation

During FY02 to FY05 the airfreight cargo has shown a robust CAGR growth of 14.7% from 0.9 mn tons in FY02 to 1.3 mn tons in FY05. During the same period aircraft movement has increased at CAGR of 12.8% from 5.1 lakh movements in FY02 to 7.3 lakh movements in FY05. The passenger movement also registered a strong CAGR growth of 14.2% from 40 mn passengers in FY02 to 59.5 mn passengers in FY05. With opening up of the economy, buoyant trade, new low cost carriers coming up and upgradation of airports across the country the cargo handled by air is slated to grow more rapidly in the next decade.

The major commodities being air freighted out of India are garments, machinery, components, pharmaceuticals, dyes, chemicals and perishables such as fruit, vegetables, flowers, fish and meat.

India's air cargo traffic is expected to grow at 8-10% CAGR over next ten years

A study by Drewry and APL Logistics has revealed that India's air cargo traffic could be reasonably expected to grow at 8 - 10% CAGR over next ten years. The rising cargo flows have resulted in improved freight rates, which will further increase the demand for air freight.

Worldwide airport traffic report summary

Stats Region	Ytd Sep 2005 (m n)	Ye Sep 2005 (mn)	% Chg over last year		
			Month	Ytd	Ye
Passengers					
AFR	81.2	106.5	6.7	9.6	9.6
ASP	610.7	811.7	7.2	7.1	7.7
EUR	946.6	1,213.5	7.4	7.4	7.3
LAC	179.8	235.3	12.4	11.6	12
MEA	70.5	91.2	14.5	9.6	9.1
NAM	1,113.8	1,464.8	6	5.2	5.7
ACI	3,002.9	3,923.2	7.3	6.9	7.1
Cargo					
AFR	0.7	0.9	-1.1	3	2.4
ASP	18.2	24.7	4.3	4.8	5.9
EUR	11.2	15.3	1	2.2	3.7
LAC	2.4	3.3	0	2.2	2.6
MEA	2.4	3.2	14.3	8.5	8.8
NAM	20.1	27.3	-0.3	-0.2	1
ACI	55.2	74.9	2.1	2.4	3.5
Movements					
AFR	1.4	1.9	3.3	2.6	2.9
ASP	5.6	7.5	4.7	6.1	6.7
EUR	13.4	17.5	3.3	3.9	4.1
LAC	3.2	4.3	1.1	3.1	3.1
MEA	0.6	0.9	9.1	4.5	3.7
NAM	25.0	33.1	1.2	0.5	0.5
ACI	49.6	65.4	2.4	2.3	2.4

Source: ACI Annual Traffic Statistics

Passengers: total passengers enplaned and deplaned, passengers in transit counted once.

Cargo: loaded and unloaded freight and mail in metric tons.

Movements: landing or take-off of an aircraft.

The Airport Traffic Report Summary is a comparison of airports with complete data series for the 12-month period under review. Number of participating airports by region included in this summary: AFR: 92; ASP: 118; EUR: 294; LAC: 141; MEA: 20; NAM: 167; 832

AFR - Africa; ASP – Asia Pacific; EUR – Europe; LAC - Latin America; MEA - Middle-East Asia; NAM – North America

The need of the hour is that special attention should be given to speedy handling of the cargo and reducing its dwell time. The objective is to reduce the dwell time of the cargo from the present level of 4 days to 12 hours and of imports from the present level of 4 weeks to 24 hours to bring India in line with internationally achieved norms. Cargo clearance is to be executed on 24-hour basis.

Infrastructure facilities relating to cargo handling

Infrastructure facilities relating to cargo handling like satellite freight cities with multi-modal transport, cargo terminals, cold storage and retrieval systems, mechanised transportation of cargo, computerisation and automation, etc, should be set up on a priority basis. Such facilities should come up at smaller places too. The electronic data interchange systems should be developed and linked amongst all stakeholders in the value chain.

Air hub: An air hub is a special kind of infrastructure that is key to India's success as a SCM player. Globally, there are some giants in air hubs serving as gateways for entry into a region, market or trans-shipment.

India hasn't seen great development in the air hub for logistics, partly because the air cargo business was small and there was not enough demand. Consequent to demand, air hubs have been developed. Blue Dart, the leading air cargo operator within India, already has six air hubs across India and has tie-ups with MNC majors like DHL for inbound traffic. Over the past few years, global majors like UPS, FEDEX, TNT and DHL, have all firmed up their commitment to India.

DHL has set up the first air hub in Delhi at a cost of Rs.180mn in 2003. Lufthansa is airlifting the cargo handled via the DHL air hub in Delhi, which is a five-days-a-week service. DHL's acquisition of Blue Dart, one of India's leading air cargo operators, adds another six aircraft and six air hubs across India to its network. This is one of the first major consolidation efforts in the highly fragmented Indian logistics industry. It puts DHL into the top spot in the industry and raises the entry barriers between itself and its other MNC rivals like FEDEX, UPS, and TNT.

Poised very well for growth

Aviation is poised very well to play an important part in the overall logistics and supply chain management due to the speed and efficiency combined with low cost carriers and infrastructure facilities at various metro and non-metro airports.

Vision for logistics in India

Logistics infrastructure to support high growth industries

In the next decade, India is expected to become the leading global hub for the manufacture of automobiles, auto-ancillaries, pharmaceuticals, hi - tech electronics, processed foods, oil, construction materials and in services sectors such as healthcare, Information Technology, finance, construction and education. For India to grow, the logistics infrastructure should efficiently and effectively support these sectors of the economy. A well articulated logistics and industry strategy should be put in place and marketed aggressively.

With products being uniform, standardised and commoditised, logistics has become a dominant part of the competitiveness equation. Indeed, only 20% of the world's population can afford 80% of goods and services currently offered. Competition is indeed very high since every country and company will be competing to reach these affluent markets. To gain competitive advantage it is imperative to develop appropriate supply chain clusters to support the new growth industries.

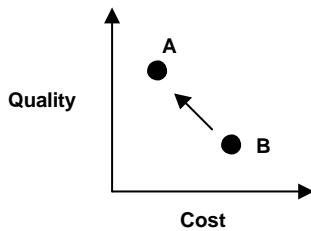
Increasing logistics efficiency to achieve global standards

India is a vast country with several states. Each state has its own rules and regulations relating to the entry and exit of goods and vehicles. The dominant industry in each state is different. In terms of geography India is more like China, the US or the European Union. Logistics is closely related to the GDP and manufacturing and service activities. It is difficult to benchmark a country and follow the same path of growth.

In India, the transfer of goods among businesses and also from a business to the customer, is done by road, train, and air. Logistics is asset intensive requiring huge investment in infrastructure i.e. roads, airports, seaports and also state-of-the-art warehouses. For India to achieve international standards it should benchmark itself for air cargo handling against Singapore or Hong Kong; for sea cargo against Singapore port and in SCM against world giants like UPS, FedEx among others. In the US, for example, the global giants such as UPS, FedEx use IT for increased efficiencies. India can learn from these successful global companies for increasing its logistics efficiency and achieve global standards.

To build logistics as a part of the industry cluster

India should look to build logistics as a part of the industry cluster. The idea is to create a self-contained complex within which all the requisite industrial infrastructure and supporting facilities are provided. In this manner, the industry infrastructure, logistics and IT facilities will all be ready simultaneously. If this kind of industry planning is brought into practice and it is shared with MNCs and other countries, it will become easy for companies to invest in India. For example, central to the industry cluster concept and development of the world class petrochemical complex located on the Jurong Island in Singapore, is its planning as an integrated complex with refineries, marine facilities, such as jetties and other berthing facilities services such as warehousing, waste treatment, fire fighting, medical and emergency response; and a common service corridor and infrastructure such as roads and drains. The advantages of economies of scale and optimal land utilisation make the provision of common facilities an attractive proposition to many industrialists and international business organisations. There are similar projects in various stages of development around the world and India should not be left behind in this endeavor.

Measurement of logistics performance

Source: Kotak Securities - Private Client Research

Reduce costs and increase quality of logistics services

We measure logistics performance using a two-dimensional map. On one axis, we have logistics costs and on the second axis we have the quality of logistics services. Currently, our position (Point B) is characterised by moderate logistics costs and poor quality of logistics service. We have to move up and attain higher quality at optimal cost (Point A).

Broadly, the nature of costs can be classified as

- Direct (transportation and handling).
- Indirect (inventory, losses within a system, etc).
- Hidden (costs borne by other systems like infrastructure wear and tear, safety, pollution, distortions due to side payments, losses outside a system, etc).
- Opportunity (foregone sales transactions).

The companies have focused on direct costs, and have ignored indirect, hidden and opportunity costs of poor logistics quality. If some commodity is moving in a particular route, say iron ore from Bellary to Chennai, and if infrastructure for it to move by the shortest possible route is not provided it results in national waste. Hence, the vision is to forecast demand, make investments and build infrastructure before the need arises.

To reduce transit time

The average transit time from India to western countries is more than what it is from other countries. This is due to infrastructure constraints including warehouses. An emerging trend in warehousing is automation especially use of RFID (radio frequency identification). Streamlining the custom process with modern technology and process to support the flow of goods in the supply chain should be implemented fully to support the trade and the taxation systems should also be unified.

To effectively utilise warehouses

Indian ports have huge warehouses but are very poor in managing them and are making losses. The vision is to effectively utilize these warehouses so that the goods can be stored at optimum cost and maintain their quality. Proper warehousing can also facilitate easy access to goods as and when required thereby ensuring continuous supply of goods. Distribution management is the backbone of supply chain to achieve the 7Rs

1) right quality 2) right product 3) right place 4) right time 5) right cost 6) right quantity and 7) right condition.

ICD and CFS capacity in the country should be quadrupled

The ICD and CFS capacity in the country should be quadrupled to keep pace with the growth of imports and exports, expansion of capacities at ports, turn around ships quickly and provide efficient service at the container terminal. There are 90 CFSs with a capacity to handle 1 mn TEUs (twenty foot equivalent units) and 64 ICDs handling 1 mn TEUs. However, the country would be handling over 5 mn TEUs in next few years for which there is only 30% back up facility instead of 60-70% required back up capacity for the handling of containerised cargo. There is an urgent need to develop an efficient ICD/CFS network to have effective multimodal transportation.

To reduce and simplify procedures by developing one-stop CFS

There will be huge cost savings if we can reduce the transit time of the containers. Today, this takes three days at the ports, while it takes three to six days in a CFS and two days for documentation for a container. If we link the terminal and the CFS through Electronic Data Interchange (EDI), the documentation process can be reduced and completed in 24 hours. There should be more one-stop CFSs in the country. By 2007, we need 15 CFSs and by 2008 we need 45 CFSs with web link, widened road links and dedicated rail linkages.

Improvement in the quality of infrastructure

Improvement in the quality of infrastructure will promote the competitiveness of Indian trade. Earlier the efficiency of the shipping and ports sector would be summed up as larger ships and deeper ports. The vision is to make that larger ships, deeper ports and faster evacuation. Earlier we used to concentrate only on the capacities to receive the goods at the port in terms of accommodating bigger ship with larger carrying capacities. But this itself does not solve the problem completely. One has to provide for faster turnaround for ships and also speedier evacuation of the cargo from the customs area.

To develop any of the Indian ports as the transshipment hub of South East Asia

India is ideally placed between the two times zones of the world that is the eastern world and the western world. The vision is to take advantage of this position and increase India's share in the world trade. The need of the hour is to develop any of the Indian ports as the transshipment hub of South East Asia. Transshipment hub receives bulk cargo, which contains cargo of various parties combined together for ease of transport to save costs. At the transshipment hub the cargo is split up into smaller cargo and then again redistributed to their final destinations. This is a value added activity and has huge business and growth prospects. India has been working on the plan and Indian ports have a huge potential to be transshipment hubs of South East Asia as most of the Indian ports are close to the international sea route. The vision is to develop Vallarpadam/JN Port/Tuticorin port as a substitute for Colombo and Singapore port for Indian transshipment cargo.

Vision for various logistics services

Services	Today	Future
Consignment tracking	Track and trace	GPS / GIS / SMS – dynamic routing of inventory
Logistics	Transportation	Movement solutions: manpower, money, material
Regulatory	Compliance	Consultative + compliance
Transportation	Trucking	Bonded, Express, Trucking
Warehousing	Space provider	Dynamic engagement between stock and fulfillment
Material movement	Pickup & drop-off	Procurement and movement

Source: Kotak Securities - Private Client Research

To give end-to-end solutions to capture the benefits of entire value chain

Till date, in India, lot of unorganized and small players carry out different activities of logistics. These players are scattered all over the country and have expertise in their own areas of operation but they fail to give one-stop shop solutions for their customers. Today it is very essential to give end-to-end solutions to capture the benefits of the entire value chain of logistics activities. From a common suite of services, almost every service provider will have to upgrade as well. The signs of such upgradation are already visible in third party logistics service providers, but there's a long way yet to catch up with global giants but good times have just begun for the Indian Logistics service providers.

Formation of Central hub for logistics in India

India should look to develop one of the cities as the central hub for all logistics and distribution activities. The location should be such that one can easily store goods and then distribute them all over the country as and when required. The place should be accessible and well connected by railways, roads and airport. Retail sector in India is booming and it is ideal that when foreign giants like Wall-mart, Dell, Cisco, Ikea and others are allowed to set up their retail chains in India they would like to set up their central hub in one city from where they can distribute the goods all over the country.

Consolidation of service providers

There are scores of service providers of all kinds, sizes and competencies in India. That's the sign of a market just opening up, and eventually we should see consolidation and the emergence of players with serious size and scale. Only players with superior logistics capabilities will be able to achieve sustained growth for a long period of time.

Conclusion

We believe that logistics will be one of the fastest growing businesses going forward and logistics service providers are well positioned to take advantage of the logistics boom that is going to unfold over the next few years.

Research Team

Name	Sector	Tel No	E-mail id
Jay Prakash Sinha	Economy, Banking, FMCG, Agro-Industry	+91 22 5634 1207	jay.sinha@kotak.com
Avinash Gorakshakar	Auto, Auto Ancillary	+91 22 5634 1522	avinash.gorakshakar@kotak.com
Dipen Shah	IT, Media, Telecom	+91 22 5634 1376	dipen.shah@kotak.com
Sanjeev Zarbade	Capital Goods, Engineering	+91 22 5634 1258	sanjeev.zarbade@kotak.com
Teena Virmani	Construction, Mid Cap, Power	+91 22 5634 1237	teena.virmani@kotak.com
Awadhesh Garg	Pharmaceuticals	+91 22 5634 1406	awadhesh.garg@kotak.com
Apurva Doshi	Logistics, Textiles, Mid Cap	+91 22 5634 1366	doshi.apurva@kotak.com
Nikhil Ranka	Capital Goods, Engineering, Paper	+91 22 5634 1440	nikhil.ranka@kotak.com
Saurabh Gurnurkar	IT, Media, Telecom	+91 22 5634 1273	saurabh.gurnurkar@kotak.com
Vinay Goenka	Auto, Auto Ancillary, Sugar	+91 22 5634 1291	vinay.goenka@kotak.com
Shrikant Chouhan	Technical analyst	+91 22 5634 1439	shrikant.chouhan@kotak.com
Sunil Singh	Editor	+91 22 5634 1223	singh.sunil@kotak.com
K. Kathirvelu	Production	+91 22 5634 1557	k.kathirvelu@kotak.com

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