

Customised Research Bulletin

Sector focus: Logistics



Volume VI: December 2010

Key Verticals



.....Automotive



Commodities.....



.....Oil & Gas



Infrastructure.....



Power.....



.....Logistics



Real estate.....

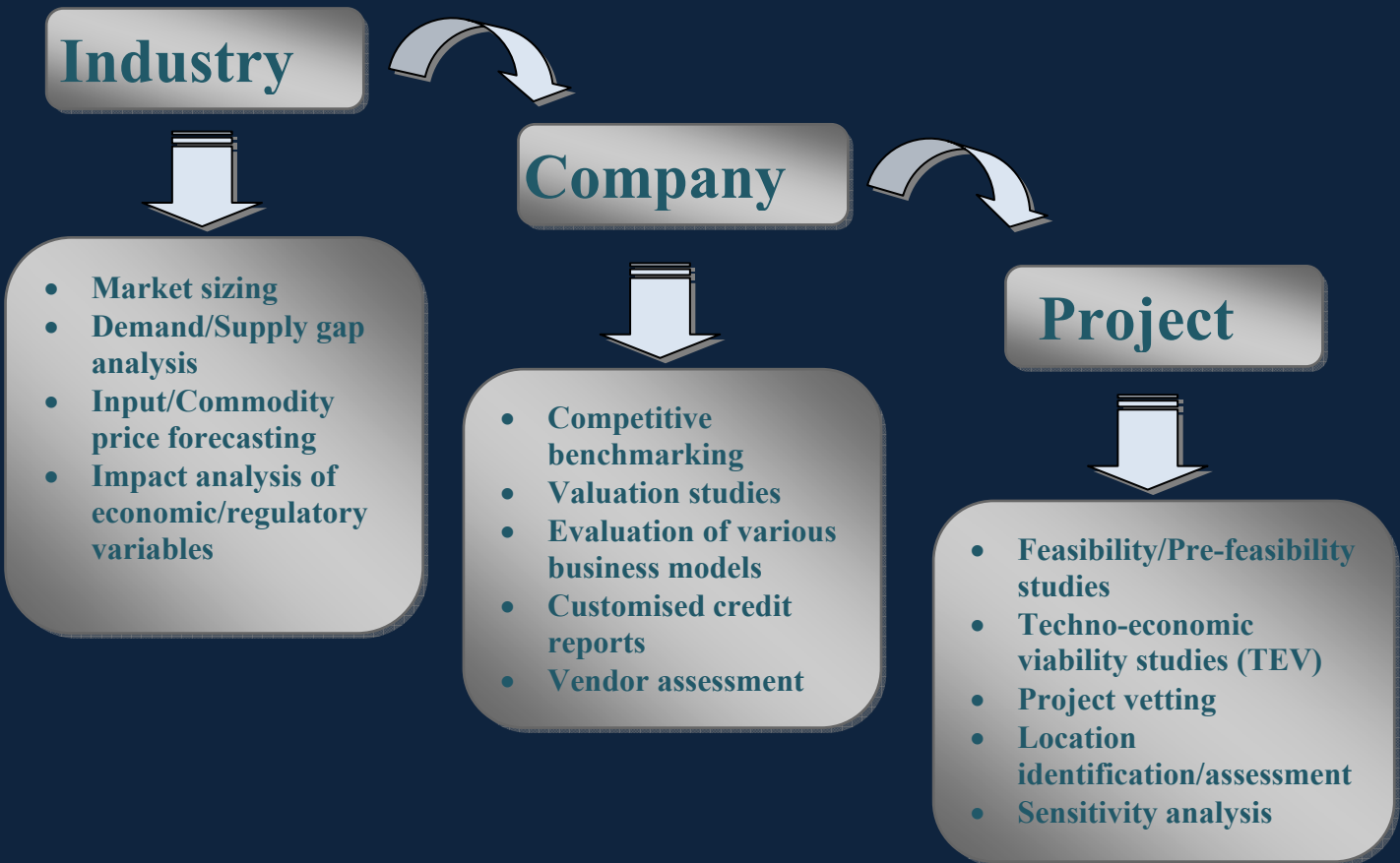


.....Hotels & Hospitals

& OTHERS

CRISIL Industry Research covers 65 industries

Key Offerings



Industry



- Market sizing
- Demand/Supply gap analysis
- Input/Commodity price forecasting
- Impact analysis of economic/regulatory variables

Company



- Competitive benchmarking
- Valuation studies
- Evaluation of various business models
- Customised credit reports
- Vendor assessment

Project



- Feasibility/Pre-feasibility studies
- Techno-economic viability studies (TEV)
- Project vetting
- Location identification/assessment
- Sensitivity analysis

Foreword

In the sixth edition of Customised Research Bulletin, we have presented our views on the 'Logistics' sector. In the Opinion section, we have analysed the third party logistics (3PL) segment. CRISIL Research expects revenues of third party logistics (3PL) services in India to grow at a compounded annual growth rate (CAGR) of 27 per cent to Rs 190-195 billion over 2009-10 to 2014-15. The key drivers that will strengthen the case for 3PL adoption are - the potential for corporates to improve the efficiency of their increasingly complex supply-chain, the government's thrust on developing logistics infrastructure, and a favourable regulatory environment.

The sector insights in this report are based on various research assignments undertaken by our logistics sector experts. This edition also introduces our syndicated study "**Route Tracker**" – **Route-wise commodity cargo traffic mix (2011-15)**. The study gives insights on major commodity traffic movement across 21 major road routes and 11 major hubs and hinterlands. The study also gives a 5 year outlook on road infrastructure connectivity and inter-modal analysis.

We are confident that this report will be extremely beneficial to you and your business and will reinforce your trust in the accuracy and reliability offered by CRISIL Research.

A handwritten signature in blue ink, reading "N. Nagarajan".

Nagarajan Narasimhan
Director
CRISIL Research

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Opinion

CRISIL Research expects revenues of third-party logistics (3PL) services in India to grow at a compounded annual growth rate (CAGR) of 27 per cent to Rs 190-195 billion over 2009-10 to 2014-15. The key drivers that will strengthen the case for adoption of 3PL services are - the potential for corporates to improve efficiency of their increasingly complex supply-chain, the government's thrust on developing logistics infrastructure and a favourable regulatory environment. CRISIL Research's study of 3PL potential in eight non-bulk industries concludes that the potential for 3PL adoption is the highest in organised retail and consumer durables.

3PL industry's revenues to treble by 2014-15

A third-party logistics provider (3PL) is a firm that provides single-point logistics services to client companies for their supply-chain management functions such as sourcing, warehousing and transportation. CRISIL Research expects the 3PL industry's revenues in India to increase to Rs 190-195 billion by 2014-15 from Rs 57-60 billion in 2009-10. This will push up the share of 3PL services in the overall logistics services market to 3.5-4 per cent from 1.5-2.0 per cent over the five-year period.

3PL: A strong case for revenues to treble by 2014-15

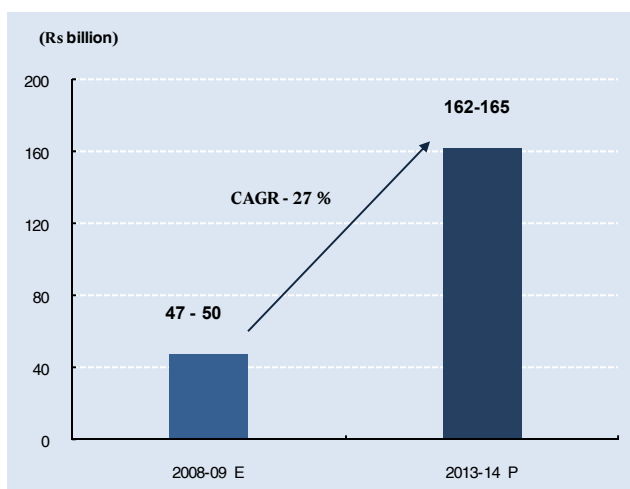
Apart from a likely strong macroeconomic growth, the key drivers of growth for the 3PL industry will be - the potential for corporates to improve their supply chain efficiency and reduce costs of warehousing and transportation, the government's thrust on developing logistics infrastructure and a favourable regulatory environment.

Strong macroeconomic growth

Despite India's healthy macroeconomic growth over the past 5 years, corporates have been slow in adopting 3PL services, mainly due to their relatively smaller scale of operations and less complex supply-chain needs, as compared to their counterparts in developed countries. Underdeveloped infrastructure and an absence of large, organised players in the 3PL industry are the other important factors.

With India's GDP expected to grow by 8-8.5 per cent over 2009-10 to 2014-15, driven by a strong growth in industry and services, consumption and manufacturing growth are poised to accelerate. This will result in increased movement of goods in the country, which would, in turn, expand corporates' scale of operations and make their supply chain more complex. Growth opportunities for the logistics

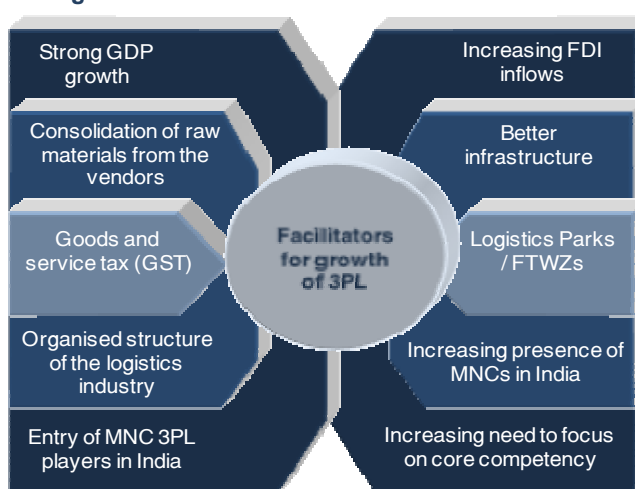
3PL market size



E: Estimated; P: Projected

Source: CRISIL Research

3PL growth drivers in India



Source: CRISIL Research

industry will hence increase, enhancing the prospects of the 3PL industry in India.

Potential for improving supply chain efficiency

The efficiency of logistics operations in India lags behind that in developed countries, translating into higher expenditure on logistics. CRISIL Research estimates the total logistics spend in India at 10.7 per cent of GDP, significantly higher than the logistics spend of 5-7 per cent of GDP across developed countries. India's greater logistics spend is largely due to inefficient logistics operations, multiple tax structures, inadequate logistics infrastructure and the unorganised nature of the transport industry.

An increasing number of corporates, in India, like their counterparts in the developed countries, are exploring outsourcing options for managing their logistics, to cope better with demand volatility, control costs and focus on their core competencies. According to a study, about 400 of the Fortune 500 companies outsource at least one logistics function such as transportation or warehousing to 3PL service providers. This indicates the potential in India for outsourcing logistics, which would boost growth for the 3PL industry.

Potential for cost reduction

In a conventional logistics operation, a company itself manages its entire supply chain operations – procuring goods, warehousing, transporting and distributing – creating inefficiencies in these operations. In the 3PL service model, a specialised 3PL player acts as an interface between a client company and its vendors and manages the supply chain operations. Given its advantage of scale, the 3PL model enables client companies to reduce logistics costs. Usage of 3PL services in a pharmaceutical company, for instance, typically lead to savings of 12-14 per cent in total logistics costs.

Favourable regulatory environment

Under the existing tax regime, companies have to maintain a distribution centre or warehouse in every state to save on CST (central sales tax) during stock transfers. This leads to the establishment of smaller warehouses with inadequate or outdated technology and equipments, thereby increasing the

companies' material handling costs and IT overheads. With the Indian government phasing out the CST and proposing to introduce GST (goods and service tax) by 2012-13, we expect companies to consolidate their warehousing facilities. The emergence of large warehouses will make the deployment of modern material handling and packaging equipment economically feasible. This will encourage companies to adopt 3PL services.

Development of logistics infrastructure

Government initiatives to develop logistics parks and free-trade warehousing zones (FTWZ) are leading to the emergence of large logistics infrastructure hubs. These hubs have modern handling, warehousing and packaging equipment, and are well-connected to the rail and road networks. The infrastructure hubs will enable logistics service providers to improve scale-efficiency and provide integrated logistics solutions, thereby reducing the cost of corporates' logistics operations and spurring the adoption of 3PL services by corporates.

Potential for 3PL is highest in organised retail and consumer durables

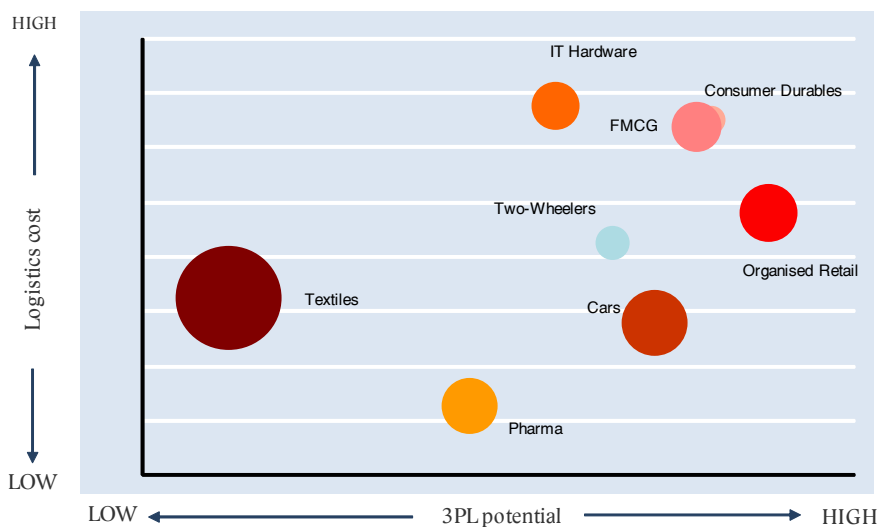
CRISIL Research's study on 3PL potential in eight non-bulk industries concludes that the potential for 3PL adoption and growth is the highest in the organised retail (comprising all products) and consumer durable industry. This is closely linked to these industries' intense requirement of warehousing facilities, efficient transport and streamlined handling of goods in inbound and outbound supply chains. Logistics costs therefore account for a higher proportion of total revenues in organised retail (estimated at 5-6 per cent) and consumer durables, than in other non-bulk industries such as textiles, pharmaceuticals and automobiles. The study considered average inventory turnover, average number of warehouses/distribution centres, warehousing infrastructure cost as a percentage of total cost, fragmentation of vendors and the distribution chain.

CRISIL Research expects the share of 3PL services in total organised retail logistics to rise from 10-11 per

cent currently to 15-16 per cent by 2014-15. Although 3PL penetration would be the highest for organised retail and cars, industries like IT hardware and FMCG (fast moving consumer goods) are also likely to adopt 3PL services rapidly given the rising complexity in their supply chain.

(Please note that the views expressed here are those of CRISIL Research and not of CRISIL's Ratings division. CRISIL Research operates independently of and does not have access to information obtained by CRISIL's Ratings Division.)

Industry-wise 3PL potential: 2009-10 to 2014-15



Note: The size of the bubble represents the market size of the sector

Source: CRISIL Research

Third-party logistics (3PL)

Who is a 3PL player?

CRISIL Research defines a 3PL company as a logistics player who can provide multi-modal transport (including rail and road transport services) and infrastructure services. A logistics player which handles a company's transportation and warehousing requirements and offers value-added services such as repackaging and reverse logistics can be termed a 3PL service provider.

Function of 3PL players

3PL players manage the overall logistics operations, spanning inventory management, supply-chain optimisation and value-added services such as managing vendors and distributors. By outsourcing logistics, companies can not only concentrate on their core business operations but also achieve cost-efficiency and improve delivery.

Current state of the 3PL industry

3PL, initially a transaction-based service, has gradually evolved into a more strategic function that is integral to a company's operations. In India, global logistics players pioneered the concept, providing 3PL services to Indian subsidiaries of multinationals. Encouraged by the visible benefits of 3PL services, Indian companies also began outsourcing their logistics operations to dedicated 3PL players, prompting domestic logistics players to offer 3PL services.

Although 3PL services in India remain confined to the more basic transportation and warehouse management, players are expected to include value-added services such as repackaging and reverse logistics. Large corporate companies and multinationals are the major users of 3PL services in India since migrating to 3PL entails additional investment on IT integration across facilities, vendors and service providers. With an increasing number of companies exploring the concept to enhance the efficiency of logistics, 3PL adoption is likely to gain momentum.

Interview

Mr. Manoj Mohta Head, CRISIL Research

Manoj Mohta, Head - Research, CRISIL Research, has over 14 years experience. Mr Mohta's experience lies in analysing diverse sectors including Automobiles, Logistics, Auto finance, Banking, Metals, Telecom, Media and Technology. Manoj holds a Master of Business Administration (MBA) degree from Northeastern University, Boston, USA and a Bachelor of Engineering degree from Roorkee University (an IIT), Roorkee. Manoj has also worked as Head Financial Research, at a venture capital funded firm, focusing on providing financial research services for global I-bankers, hedge funds and corporate clients.



How relevant is the logistics industry in the Indian economy and why is it gaining importance?

A well-developed and networked logistics industry is vital to the success and overall growth of the economy as efficient supply chain management gives industry a competitive advantage. Despite its importance and size, logistics has not been given the attention it deserves. Further, logistics has always been perceived as a cost centre, and across industries continuous efforts are made to manage logistics cost rather than use it to enhance customer satisfaction and improve revenues. We believe that logistics should be viewed as a strategic tool, to make business operations more efficient, thereby resulting in higher revenues and better profitability.

CRISIL Research estimates the overall Indian logistics spend at Rs 3.5 trillion in 2008-09, equivalent to around 10.7 per cent of GDP. This is significantly higher than that of developed countries where it averages about 5-7 per cent. A higher logistics spend as percentage of GDP can be attributed to the overall inefficiency in logistics operations, multiple tax structures, inadequate infrastructure and unorganised nature of the industry.

How is the Indian logistics industry structured and what will drive growth in this industry going forward?

The Indian logistics industry is highly unorganised (accounts

for 75-80 per cent of the market across logistics segments), as there are numerous market participants present across the value chain. In road transport, the market is highly fragmented with individual truck owners and small unorganised players or small fleet operators (SFOs) holding a significant market share in terms of truck ownership. The infrastructure segment is also highly unorganised with individual owners dominating the segment and this leads to end-user industries utilising the services of a large number of transporters, warehouse agents, and distributors, which increases logistics costs. Thus, the logistics industry in India is highly inefficient across both transport modes and infrastructure segments. This provides a strong growth opportunity for organised and integrated players to differentiate on service quality and ability to reduce costs by streamlining supply chain operations.

Increased economic activity {as indicated by the Index of Industrial Production (IIP), export-import (EXIM) trade and real GDP growth} would lead to greater transportation of goods through different modes and use of infrastructure for storage. Similarly, the growing presence of MNCs in India calls for implementation of more efficient logistics practices, which is expected to drive the industry growth.

With strong growth in the economy over the last decade, India has become a preferred destination for investment by MNCs and a globally recognised manufacturing and outsourcing hub. Consequently, demand for efficient logistics services is increasing in India, leading to the industry's growth and transformation. Therefore, the share of the organised players is expected to go up and they are expected to play a significant role in the Indian logistics industry over the next few years. We expect organised players to significantly outpace the growth of the logistics industry.

How would growth in logistics infrastructure segments support the overall logistics industry growth?

One of the major impediments to the growth of the Indian logistics industry is the lack of adequate infrastructure (both in road and rail connectivity), and a lack of dedicated logistics parks and free-trade warehousing zones (FTWZs). The inefficiencies in logistics infrastructure pushes up inventory cost and turnaround time, resulting in higher logistics cost for the industry. Going ahead, increased investments by the government to improve infrastructure are likely to provide greater connectivity across borders. The logistics infrastructure segments (CFS/ICD, warehousing and cold storages) are expected to grow to about Rs 500 billion (at a CAGR of 12.5 per cent) till 2012-13 from an estimated Rs 350 billion in 2009-10.

The growth in the CFS/ICD segment would largely be fuelled by buoyant growth in EXIM trade and increasing acceptance of containerisation in port logistics. In line with the growth in EXIM trade and container traffic, the CFS/ICD segment is estimated to record a CAGR of 18-19 per cent to Rs 57-62 billion by 2012-13 from Rs 33-38 billion in 2009-10. On the other hand, the warehousing segment is also expected to grow due to increase in trade (both domestic and EXIM) and increasing share of organized players across various sectors. As of March 2010, CRISIL Research estimates the market size of the warehousing segment at Rs 210-230 billion. It is expected to grow at a CAGR of 8-10 per cent over the next 3 years (2009-10 – 2012-13). Growth in the cold storage segment is

expected to be propelled by growth in the food processing, organised retail and food services industries. The overall market size of the cold storage segment is expected to grow at a CAGR of 16-17 per cent, over the next 3 years (2010-11 to 2012-13), to Rs 155-160 billion in 2012-13 from Rs 95-100 billion in 2009-10.

With the phasing out of the central sales tax (CST) and the likely implementation of goods & services tax (GST), comparatively less space and inventory would be required at an aggregate level. This could reduce warehousing requirement by 25-50 per cent for various sectors. Larger warehouses/distribution centres would make it economically feasible to use modern handling facilities and equipments.

How will regulatory measures aid the growth of logistics industry in India?

The logistics industry is at an inflection point owing to the evolving regulatory environment and the government's focus on increasing infrastructure investments. The changing regulatory environment, with the likely phasing out of CST in 2011-12 will encourage the creation of large warehouses at key strategic locations that could operate on the 'hub and spoke' model, thereby, promoting outsourcing of warehousing operations to the organised segment.

Further, a greater thrust on investments in the warehousing and cold storage segments is expected to provide the much-needed impetus to industry growth. An increased focus on infrastructure development with respect to logistics parks, FTWZs, and road and rail connectivity is also expected to contribute to industry growth. Further, several measures have been announced in the Union Budgets of 2009-10 and 2010-11, which are expected to favourably alter the logistics landscape in India. All these measures are expected to help in redefining the supply chain network in India and will increase the penetration of organised logistics, which, in turn, would help reduce logistics cost in India.

The Union budgets of 2009-10 and 2010-11 provided various new incentives to these sectors:

- Budget 2009-10 introduced Sec 35 AD permitting 100 per cent deduction on capital expenditure

within 1 year of investments in the warehousing space (not including investments for land).

- Union Budget 2010-11 also enhanced exemptions on customs duty & service tax on project imports of cold chain warehouses & refrigeration units used in reefer vehicles.
- 100 per cent FDI was allowed to attract huge investments in cold chain infrastructure.
- The industry has been given access to cheaper foreign debt in the form of external commercial borrowings (ECBs)

What is the potential for value-added services like 3PL in the Indian logistics industry?

A third-party logistics provider (3PL) is a firm that provides single-point logistics services to clients for supply-chain management functions such as sourcing, warehousing and transportation. For a number of years, only basic functions like transportation or warehousing have been outsourced. This scenario has been transforming gradually and going forward, players are expected to include services such as repackaging and reverse logistics, etc.

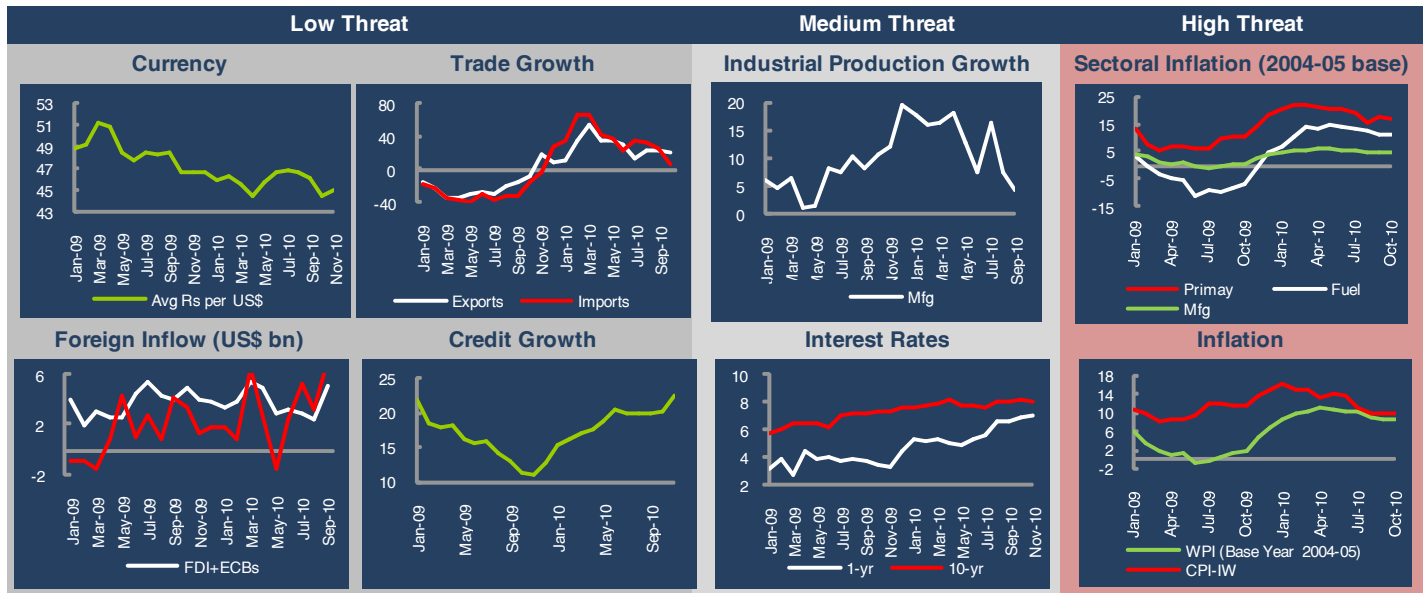
Given the flourishing economy and growing EXIM levels, Indian companies need to enhance efficiency of their supply chain operations to lower logistics expenses and gain a competitive edge. Currently, big corporates and MNCs are the major users of 3PL services in India as additional investment in IT integration across facilities, vendors and service providers is required to migrate to 3PL. Going forward, the 3PL market is expected to pick up as more companies embrace this concept owing to the logistics efficiencies it provides.

Use of 3PL services results in savings of 13-15 per cent in warehousing costs for the pharmaceutical industry and 38-40 per cent savings for the IT hardware industry. On the other hand, savings in transportation costs ranges from 4-6 per cent in the consumer durables and IT hardware industries to 12-14 per cent in the pharmaceutical industry.

CRISIL Research estimates the 3PL industry's revenues to increase to Rs 190-195 billion by 2014-15 from Rs 57-60 billion in 2009-10. This will lead to the share of 3PL services in the overall logistics services market to rise to 3.5-4 per cent from 1.5-2.0 per cent over the period.

Indian Economy

Economic Overview – December 2010



Source: RBI, Ministry of Industry, CSO and Ministry of Commerce

Macroeconomic Indicators - Forecasts

		2010-11	Rationale
Growth (%)	Agriculture	5.0	GDP grew at a higher-than-expected 8.9 per cent in the second quarter of 2010-11 on the back of improved performance of agriculture and services relative to Q1FY11. As a result, CRISIL has revised its GDP growth forecast and within it, outlook for services growth upwards. Our outlook for industry growth remains unchanged at 8.6 per cent, to be driven by robust consumption and investment demand.
	Industry	8.6	
	Services	9.4	
	Total GDP	8.6	
Inflation (%)	WPI-average	8.0-8.5	Inflation is expected to come down during the remaining part of the fiscal, on the back of improved farm output, RBI's tightening measures to tame non-food inflation and a change in the base to 2004-05.
Interest rate (%)	10-year G-Sec (Year-end)	8.1-8.3	A marginally lower government borrowing programme for FY11 than earlier announced, raising of cap on FII participation in the G-sec market and lower inflation projections would help bring down pressure on yields in the second-half of this fiscal. Under this backdrop, we expect yield on the 10-yr G-sec to hover around 8.1-8.3 per cent by March-end 2011.
Exchange rate	Re / US\$ (Year-end)	43.5-44.0	Foreign investments are expected to remain robust in FY11, thereby increasing the supply of US\$ relative to the demand. This coupled with rising interest rate differential should enable the currency to continue on its fundamental trend of appreciation.
Fiscal deficit (Incl. off-budget liabilities)	as a % of GDP	5.0	The partial roll-back of fiscal stimulus and a sustained economic recovery is expected to significantly improve the government tax revenue during FY11. This along with the revenue garnered from the spectrum sales and lower subsidy bill owing to partial decontrol of petrol prices would bring the fiscal deficit down. However, the additional government spending announced recently would exert opposite pressure.

Source: CRISIL Centre for Economic Research (CCER)

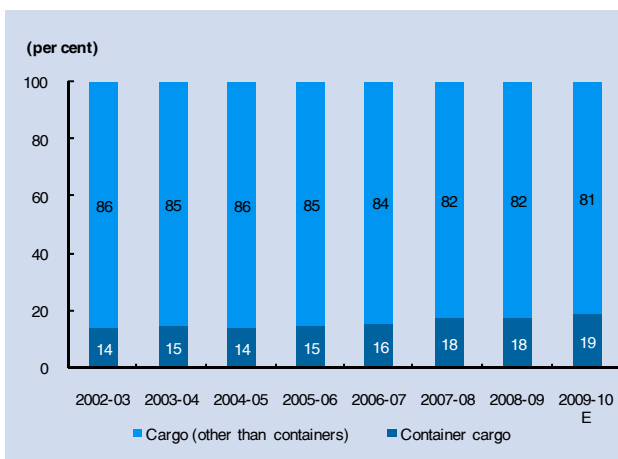
Industry Overview

Container traffic growth at 13.8 per cent CAGR

Container traffic posted a CAGR of 13.8 per cent, growing to 8.1 million TEUs (114.3 million tonnes) in 2009-10 from 4.2 million twenty-foot equivalent units (TEUs) (52.8 million tonnes) in 2004-05. This was mainly due to the continued growth in Exim traffic, higher investment infrastructure for handling container traffic and increasing preference for container cargo. India's Exim trade posted a CAGR of 27.2 per cent, rising to Rs 21,747.2 billion in 2008-09 from Rs 6,524.7 billion in 2003-04, driven by liberalisation, lowering of import duties and the emergence of India as a key outsourcing destination, especially in auto components and textiles. However, due to global economic slowdown, Exim trade declined by 2.7 per cent during 2009-10. Going forward, international trade is expected to revive gradually, with an estimated growth of 6.5 per cent over the short term.

The share of containerised cargo in total cargo at major ports has also risen to around 19 per cent in 2009-10 from 14 per cent in 2002-03 in volume terms which is primarily expected to drive growth in the CFS/ICD segment. Containerisation of cargo is increasing, as it ensures safety of goods transported, reduces packing cost, facilitates multimodal transport, multiple handling and increases the

Share of containerised cargo on increasing trend



E: Estimated

Source: Indian Ports Association and CRISIL Research

CFS/ICD

speed of transportation.

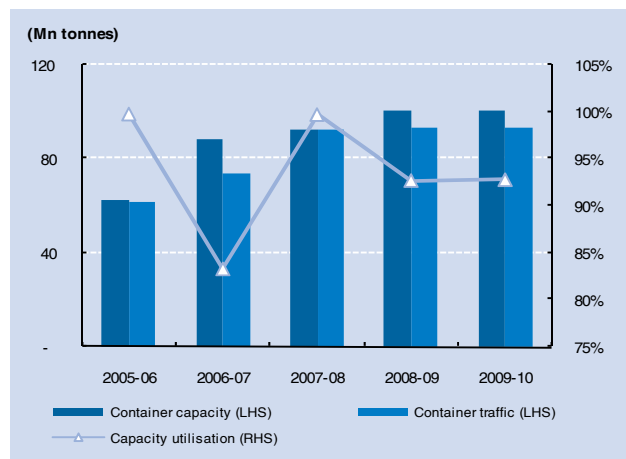
India's Exim trade is expected to gradually revive and is estimated to increase at a CAGR of 15-17 per cent over the medium term. With this, CRISIL Research estimates container traffic to post a CAGR of 13-15 per cent, to 169 million tonnes (11.6 million TEU) in 2012-13 from 114.3 million tonnes (8.1 million TEU) in 2009-10.

Revival in international trade to lead to increased volume and market size of CFS/ICD

CRISIL Research estimates the market size of the CFS/ICD industry at Rs 33-38 billion during 2008-09, of which the CFS segment is estimated to be at Rs 24-26 billion and ICD segment at Rs 10-12 billion. Container traffic growth over the past few years has provided due impetus to the development of container terminals with the emergence of several private-public partnerships for provision of port and other cargo-handling facilities. Ports and harbours, due to inherent structural and procedural constraints, could not accommodate the increased traffic in containerisable cargo. This led to the development of CFS/ICDs.

As international trade gradually revives, container traffic is expected to increase, leading to an increase in the volume of the CFS/ICD industry. With revival in demand, players will

Container capacity and traffic



Source: Indian Ports Association and CRISIL Research

be able to regain bargaining power and thus realisations are expected to improve marginally.

Immense investment opportunities; driven by Exim growth and demand from end-user segments

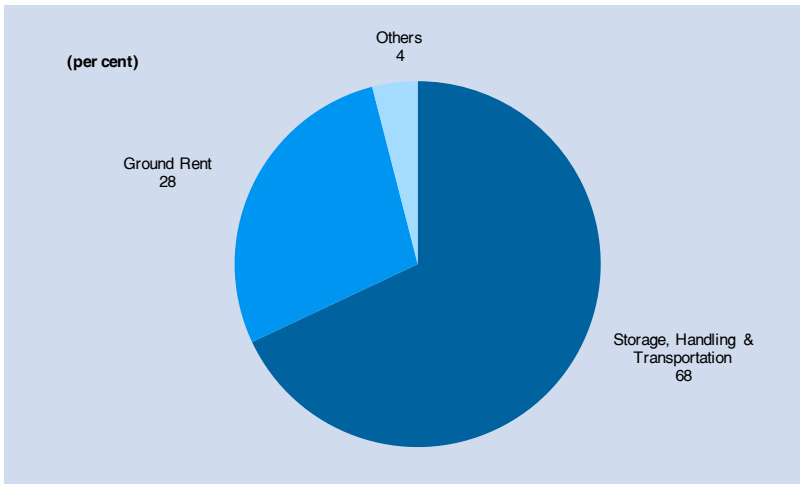
Significant opportunities exist in the sector, driven by expected growth in Exim, scope for higher container penetration and expected investments in port infrastructure, particularly container terminals. Significant investments being made in ports, rail and road infrastructure are expected to benefit the CFS/ICD industry. This is because better road and rail infrastructure can lower turnaround time and result in greater utilisation of containers.

High growth in end-user segments like organised retail, pharmaceuticals and consumer durables is expected to drive growth in container traffic over the long-to-medium term. While these goods have historically had higher container penetration, hitherto untapped segments are also opting for container transportation.

One of the key risks to the continued rapid growth of containerisation stems from inadequacies related to port infrastructure. This is apparent from high turnaround times and capacity utilisation of 100 per cent at ports. This severely hampers the efficiency of CFS operations, deterring new entrants.

The CFS/ICD segment has already witnessed increased activity of new players with the privatisation of rail containerisation in 2006. Going forward, on the back of improved infrastructure, containerised movement of Exim as well as domestic cargo is expected to become popular. Moreover, given the attractive economics of the CFS/ICD business in terms of growth prospects and profitability, proliferation of new players is expected to increase competition over the medium term.

Market size: Break-up (2008-09)



Source: CRISIL Research

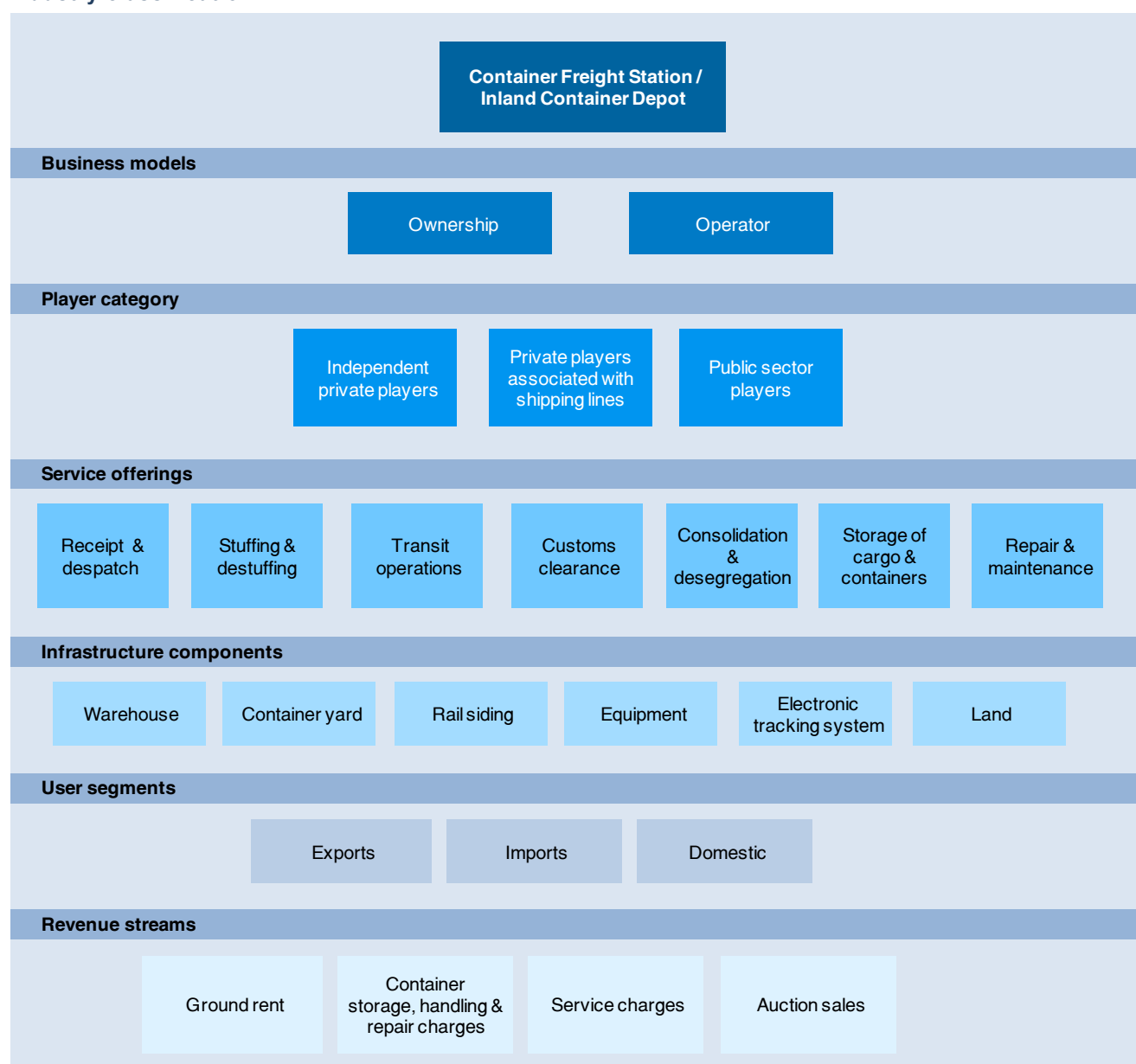
Container freight station (CFS)

CFS/ICDs are facilities set up for handling and temporarily storing Exim containers. It is a common user customs-bonded facility with public authority status, equipped with warehousing space, adequate handling equipments and IT infrastructure. While the functional aspect of CFS and ICDs is the same, the only difference is that a CFS is located near the gateway port and an ICD is located in the hinterland.

Value proposition

CFS/ICDs are one-stop shops for activities such as loading/unloading and stuffing/destuffing of containers. CFS and ICD service providers also extend value-added services, including customs clearance, less than container load consolidation, refrigerated warehousing, hub-and-spoke services, etc.

Industry classification



Source: CRISIL Research

Industry Overview

Growth in warehousing driven by growth in external trade and end-user industry segments

In the past 3 years (2006-07 to 2009-10), the warehousing industry has grown at a CAGR of 10-12 per cent per annum. The warehousing industry can be divided into two major business segments: industrial warehousing and agricultural warehousing. The industrial warehousing and agricultural warehousing has grown at 11-13 and 5-6 per cent per annum, respectively.

Several factors like the country's changing tax regime, growth across major industries such as automobiles, pharmaceuticals, FMCG and the emergence of organised retail have supported the growth of the warehousing industry. Even the growth in external trade has favourably impacted the warehousing industry's growth. In the past 3 years, Indian exports and imports grew about 22 per cent and 27 per cent, respectively. India's current share in global trade is 0.8 per cent and is expected to increase to 1.6 per cent by 2012.

Over the past few years, large companies in India have been shifting focus from couriers and cargo segments to logistics and supply chain; from being freight forwarders to integrated logistics players. Competition has increased due to the entry of new players including global 3PL players. In spite of the high bargaining power of buyers, warehouses providing value-added services are able to charge a premium.

Phasing out of CST in 2011-12 to promote organised warehousing

Phasing out of CST in 2011-12 will encourage the construction of large warehouses at key strategic locations, and thus warehousing operations would be outsourced to organised players. This will reduce the overall logistics cost for players by reducing the holding period of goods in the warehouse. Large organised players will benefit with the increase in outsourcing of warehousing operations. Heightened activity in large-scale logistics parks (refer to

Warehousing

the fact sheet in annexure) is expected to ensure a steady supply of high-quality warehousing space in the coming years that is well supported by facilities for distribution, transportation in the context of planned infrastructure facilitating inter modal logistics operations.

Warehousing industry to continue growing in double digits

As of March 2010, CRISIL Research estimates the market size of the warehousing industry at Rs 210-230 billion, with the industrial and agricultural warehousing segment (excluding temperature-controlled warehousing) in the range of Rs 180-200 billion and Rs 25-35 billion, respectively.

The warehousing industry has grown at a CAGR of 10-12 per cent per annum over the past 3 years (2006-07 to 2009-10). Industrial warehousing and agricultural warehousing have grown at the rate of 11-13 per cent and 5-6 per cent per annum, respectively.

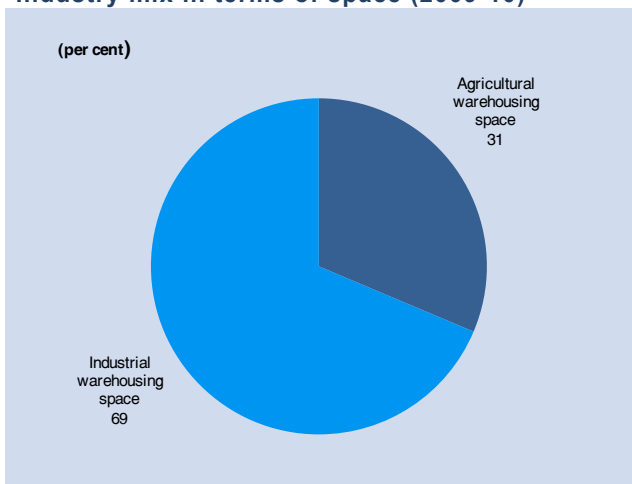
CRISIL Research expects the market size of the warehousing industry to continue growing in double digits over the next 3 years (2009-10 to 2012-13).

Significant investments expected in FTWZs

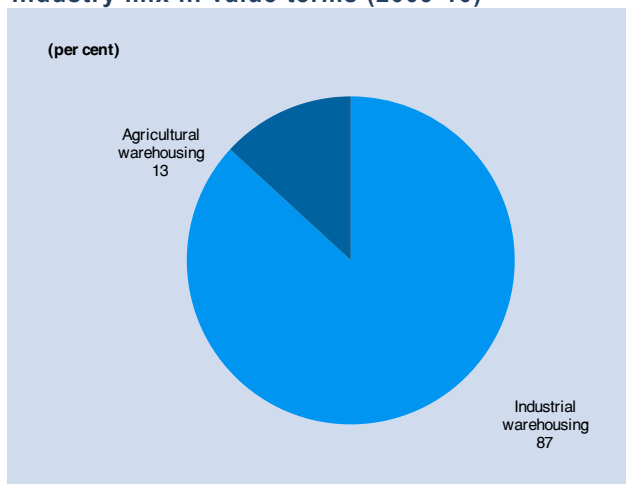
A significant proportion of investments in warehousing will be made towards free-trade warehousing zones (FTWZs) and logistic parks.

This growth will be driven by organised warehousing, a changing tax structure and potential savings in carrying costs. Given that a large part of construction of logistics parks and Free Trade Warehousing Zone (FTWZ) is expected to take place over the next 2-3 years, we expect utilisation levels of organised players to reduce.

Industry mix in terms of space (2009-10)



Industry mix in value terms (2009-10)



Note:

- 1) Total warehousing space is estimated to be 1,500-1,600 million square feet.
- 2) Agricultural warehousing does not include temperature-controlled warehousing.
- 3) Industrial warehousing includes liquid/gas warehousing.

Source: CRISIL Research estimates

Warehousing

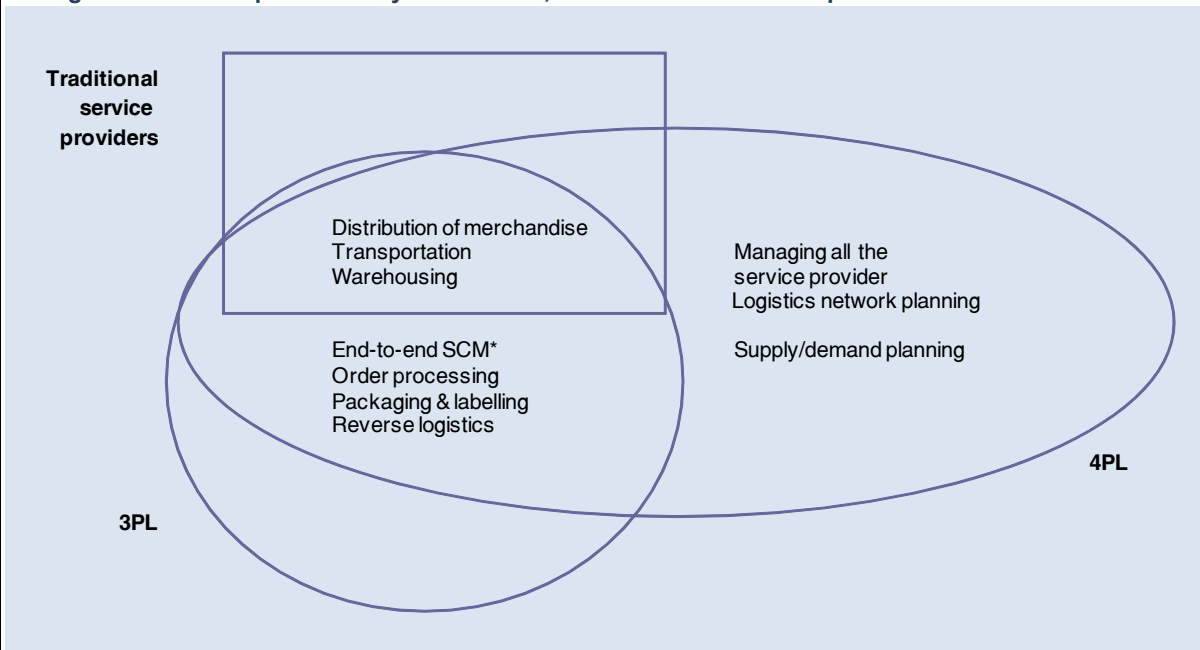
Warehousing involves storage of goods and merchandise in order to protect the quality and quantity of the stored product awaiting future use. It is an integral part of the logistics value chain, forming the node, which allows for collection, storage, sorting and dissemination of goods within the supply chain.

A majority of warehouses are based on the ownership model wherein promoters own the warehouse. A few entities, instead of directly purchasing land and developing facility prefer to take it on lease. Tie-ups may be in the form of leasing the land on a long-term lease basis and developing facility or leasing the built-to-suit premises from a development company on a long-term lease. This allows players to enhance their presence in the business without investing capital.

Warehouse management in India largely follows the Clearing and Forwarding (C&F) agent model. Typically, Indian warehouses are in the form of depots or stocking points managed by agents for companies on a contractual basis. Companies use these depots to facilitate partly the transfer of goods between stock points.

3PL and 4PL are at a nascent stage in India. The following graph depicts the range of services ideally provided by traditional, 3PL and 4PL service providers.

Range of services provided by traditional, 3PL and 4PL service providers



*Supply Chain Management

Note: Traditional service providers include transporters, stockist and clearing & forwarding agents

Source: CRISIL Research

Industry Overview

Temperature controlled warehousing (TCW):

Growth in organised retail, food services industry and export of processed foods to drive demand for cold storage

The domestic cold storage industry has grown at a CAGR of 13-14 per cent over the past 5 years (2005-06 to 2009-10), to Rs 95-100 billion in 2009-10 from around Rs 52 billion in 2005-06. Demand in volume terms rose at a CAGR of 12 per cent, to 17 million tonnes from around 9.5 million tonnes. The key growth drivers here have been the rise in demand from relatively new user segments such as food services and organised retail and the growth in exports of processed food items and value-added frozen products such as green peas, corn, ice cream, tomato puree, mango pulp, meat products etc.

Going forward, CRISIL Research estimates the overall market size of the TCW segment to grow at a CAGR of 16-17 per cent, over the next 3 years (2010-11 to 2012-13).

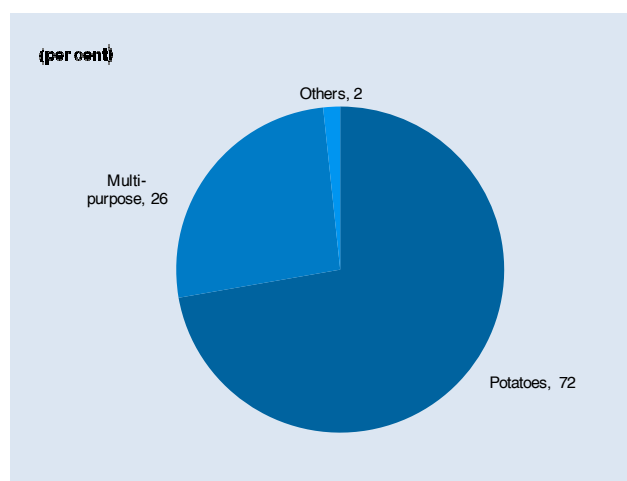
Cold chain

During this period, the demand (in volume terms) is estimated to increase at a CAGR of 6-8 per cent. This rise is expected to be driven primarily by growth in organised retail, the food services industry and exports of processed foods.

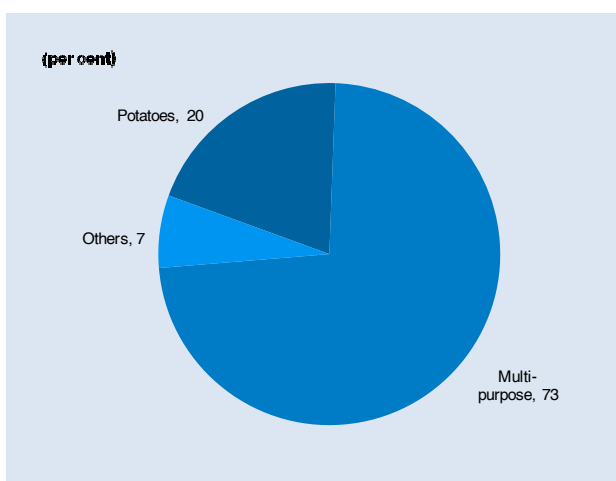
Product mix skewed towards potatoes

Potatoes constitute the largest share, accounting for about 70-75 per cent in volume terms. However, its share is a mere 18-20 per cent in value terms. This is mainly on account of the low value of the produce and rentals being charged for the entire season (spanning 8-9 months) than on a monthly basis. Other TCW segments including milk products, fruits & vegetables, meat and fish products have better rentals and margins.

TCW product mix in volume terms (2009-10)



TCW product mix in value terms (2009-10)



Notes

1. Multi-purpose cold storages are cold storages where potatoes, fruits and vegetables, meat, fish etc can be stored at the same time.
2. Meat and fish products account for over 50 per cent of the 'others' segment.

Source: CRISIL Research

Temperature controlled vehicles (TCVs):

Growth in TCV segment majorly driven by retailing and food service industry

Over the past 3-4 years, volumes of the TCV segment have been growing at a CAGR of 15 per cent, driven by demand from the retail and food service industries. Meat transported to the ports for export to the Middle East, which is only handled by a few players, contributes to over 50 per cent of the volumes. Hence, growth and profitability in this segment depends upon the actions and strategies of these few players.

CRISIL Research expects the market size of the TCV segment to grow by 19-21 per cent between 2009-10 and 2012-13. We expect meat & meat products, confectionary, ice creams and frozen products (like green peas) to be the key growth drivers. The product mix in value terms is skewed towards meat & meat products.

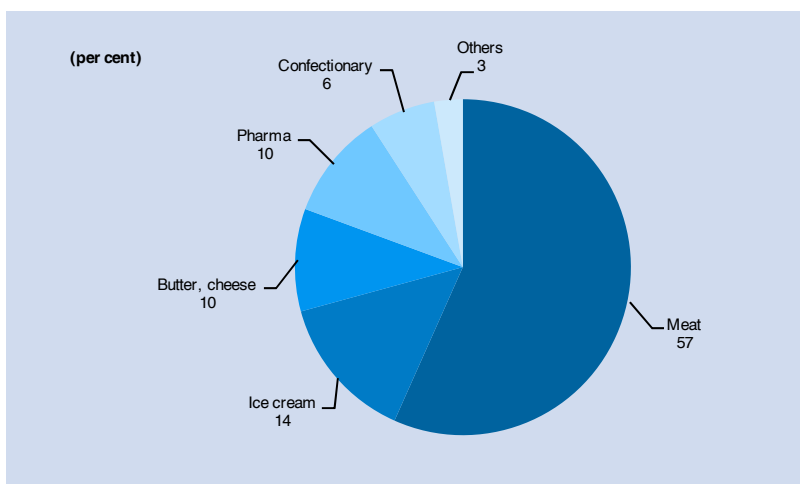
Cold chain industry to continue growing strongly

CRISIL Research estimates the market size of the cold chain industry at Rs 100-105 billion in 2009-10. During the same period, the market size of the TCW segment was estimated at Rs 95-100 billion in value terms and 16-18 million tonnes in volume terms. The market size of the TCV segment was estimated at Rs 3-5 billion and the number of refrigerated transport vehicles at around 2,500-3,000 units.

Increasingly, large players are opting for investments into multi-purpose warehouses which can maintain different temperature, humidity and other climatic requirements for different types of products simultaneously. These warehouses tend to have the best average rentals and utilisation levels. Higher utilization levels in turn are crucial for better profitability given the high levels of operating leverage within the industry (over 50 per cent of costs are fixed).

CRISIL Research estimates the overall market size of the cold chain industry grow by double digit CAGR over the next 3 years (2010-11 to 2012-13).

TCV product mix in value terms (2009-10)



Notes:

Multi-purpose cold storages are cold storages where potatoes, fruits and vegetables, meat, fish etc can be stored at the same time. Meat and fish products account for over 50 per cent of the 'others' segment.

Source: CRISIL Research

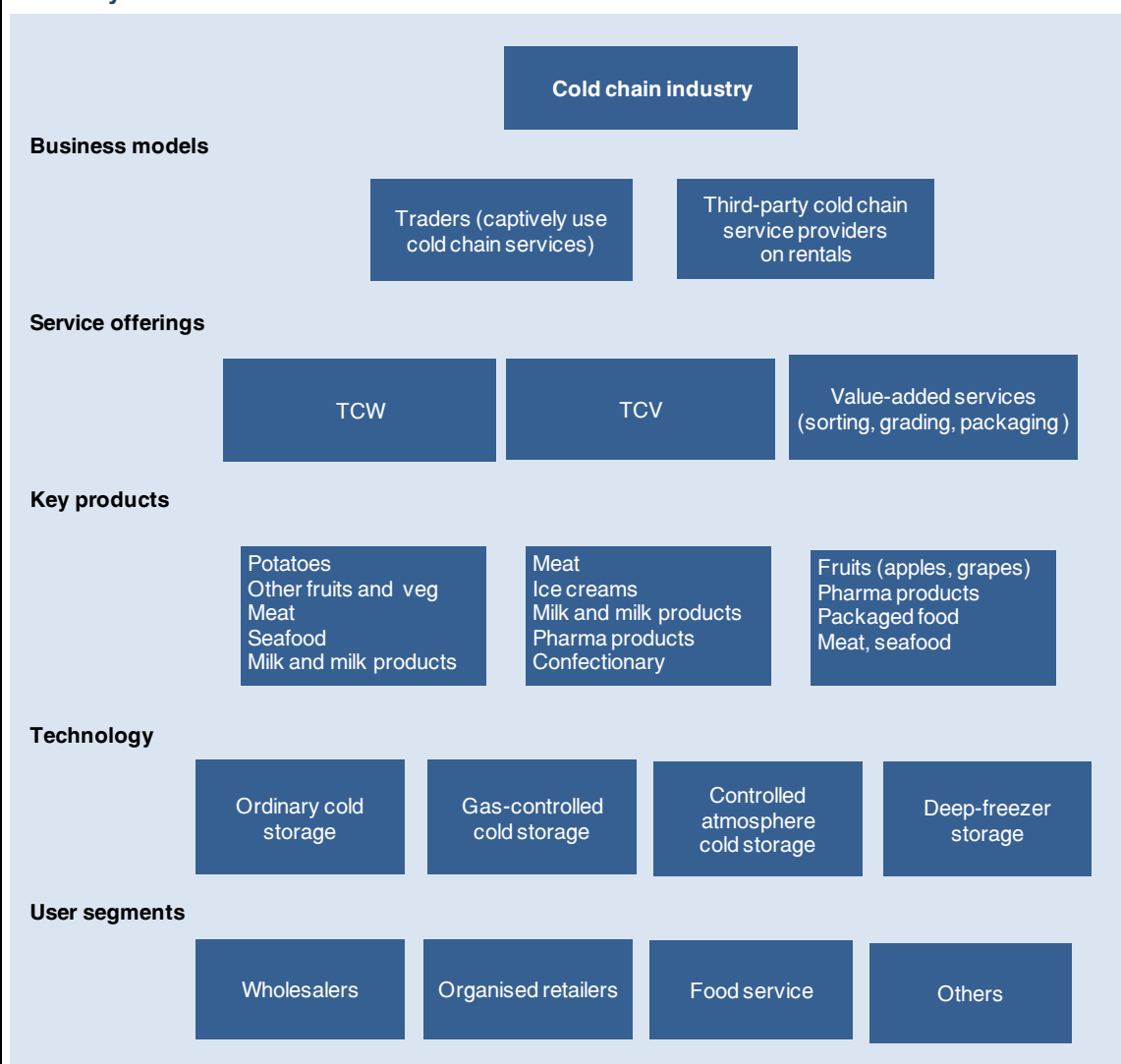
Cold chain storage

Cold chains provide storage and distribution services of products maintained at a given temperature. The specific temperature tolerance depends on the product being transported. The infrastructure required for a cold chain consists primarily of:

- Temperature controlled warehousing (TCW)
- Temperature controlled vehicles (TCVs)

The minimum capacity of a cold storage facility is about 4,000-5,000 tonnes and the typical capital investments for this would be about Rs 6,500-7,500 per tonne, excluding land costs. Hence, this segment is moderately capital-intensive although the cost of other requisites (such as land, power requirement etc) is often high.

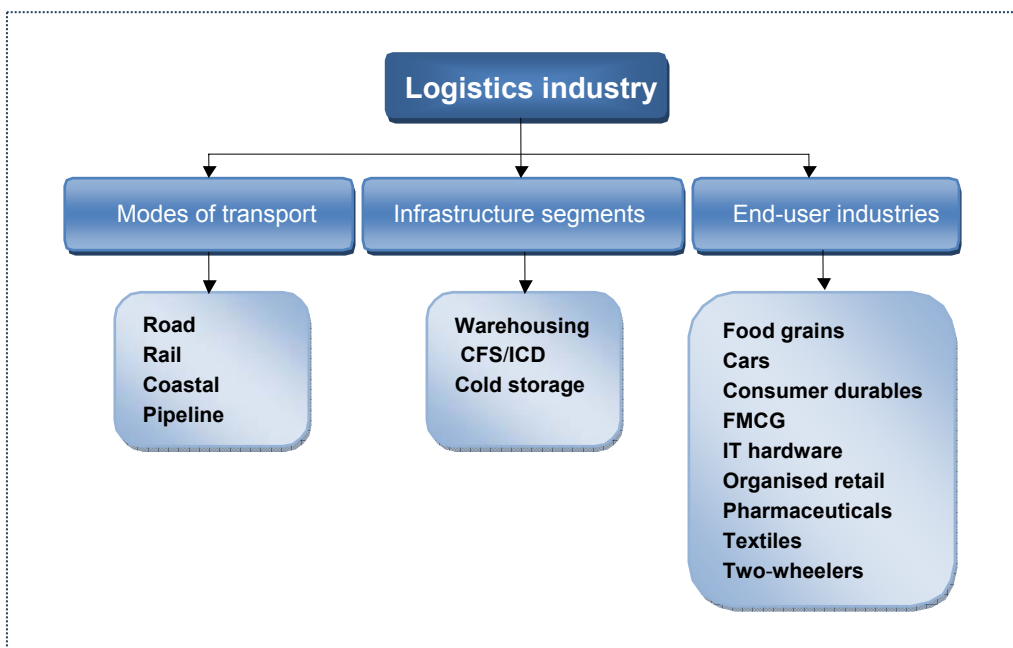
Industry classification



Note: TCV: Temperature controlled vehicles; TCW: Temperature controlled warehouses

Source: CRISIL Research

CRISIL Research covers logistics as a specific vertical, covering both service providers (transport companies and infrastructure providers) and end-user segments. We also have a deep understanding of movement of several bulk and non-bulk commodities such as steel, cement, fertilisers, iron ore, consumer durables, FMCG, organised retail etc., which has been facilitating trade and thereby driving the demand for logistics. Our regular coverage on related infrastructure sectors such as roads, railways, ports etc. adds strength to our understanding of the logistics industry and helps in estimating opportunities and forecasting demand. CRISIL Research is, thus, well positioned to bring out deep insights into logistics and distribution optimisation engagements.



Note: CFS: Container freight station; ICD: Inland container depot

Source: CRISIL Research

Key offerings

- Market-sizing and competitive assessment for different transport modes (roads, rail, coastal and pipeline) and infrastructure segments (cold chains, warehousing and CFS/ICD).
- Project IRR analysis across various infrastructure segments and traffic analysis across major routes within the country using different modes.
- Commodity-wise analysis of container traffic movement in India.
- Market-sizing, growth prospects and opportunities for 3PL (third-party logistics) in India.
- Assessment of costs for inbound and outbound supply chain across various end-user industries.
- Commodity-wise cost analysis of major commodities transported using various modes of transport.
- Benchmarking of players and service providers (CFS, ICD, warehousing etc.)
- Vendor assessment: credit and cost-benefit analysis

Route-Tracker

Insights on Commodity and Route-wise Road Traffic: 2011-15

Strengthening “informed decision making” of:

- Logistic support-infrastructure players
 - Warehousing
 - Cold storages
 - CFS/ICD
- 3PL providers

- Road infrastructure (BOT/BOOT) players
- Integrated logistic players
- Organised surface transporters



21 ROUTES – TO AND FRO

Northern Region		
North-West	North-South	North-East
NCR to JNPT	NCR to Bengaluru	NCR to Kolkata
NCR to Mumbai	NCR to Chennai	Ludhiana to Kolkata
Ludhiana to JNPT	NCR to Hyderabad	NCR to Nagpur
	Ludhiana to Bengaluru	
Western Region		
West-East	West-South	West-North
Ahmedabad to Kolkata	Mumbai to Bengaluru	Mumbai to NCR
Mumbai to Kolkata	Mumbai to Chennai	JNPT to NCR
Jaipur to Kolkata	Mumbai to Hyderabad	JNPT to Ludhiana
	Ahmedabad to Bengaluru	
	Jaipur to Bengaluru	
Southern Region		
South-East	South- North	South- West
Bengaluru to Kolkata	Bengaluru to NCR	Bengaluru to Mumbai
Hyderabad to Kolkata	Chennai to NCR	Chennai to Mumbai
Bengaluru to Nagpur	Hyderabad to NCR	Hyderabad to Mumbai
	Bengaluru to Ludhiana	Bengaluru to Ahmedabad
		Bengaluru to Jaipur
Eastern Region		
East- North	East -West	East-South
Kolkata to NCR	Kolkata to Ahmedabad	Kolkata to Bengaluru
Kolkata to Ludhiana	Kolkata to Mumbai	Kolkata to Hyderabad
Nagpur to NCR	Kolkata to Jaipur	Nagpur to Bengaluru

TOP COMMODITIES

BULK	NON-BULK /EXPRESS
Cement	Auto components
Food grains	Consumer durables
Iron ore	FMCG
Raw and Finished steel	IT hardware
Petroleum, Oil and Lubricants	Mobile handsets
	Organised retail (food)
	Organised retail (non-food)
	Pharmaceuticals
	Stone, marbles and tiles
	Textiles

11 MAJOR HUBS

West	North / East	South
Jaipur	Ludhiana	Hyderabad
Ahmedabad	NCR	Chennai
Mumbai	Nagpur	Bengaluru
JNPT	Kolkata	

Note

CRISIL Customised Research

CRISIL Research, the leading independent and credible provider of economic, sectoral and company research in India, utilises its proprietary information networks, database and methodologies to provide you customised research inputs and conclusions for business planning, monitoring and decision-making.

CRISIL Research provides research inputs and conclusions to support your decisions while

Lending to an entity

Taking a stake in an entity

Transacting/partnering with an entity

Feasibility of entry into a new business segment

Feasibility of capacity expansion

Choice of location, fuel, other inputs

Choice of markets, targeted market share

Product mix choices

Production/sales planning

CRISIL Research provides you the following inputs to help you identify/assess business opportunities or review business risks

Identification/assessment of new business themes/areas

Building futuristic scenarios and discontinuity analysis over the long term

Assessing the impact of changes in economic variables, commodity prices on your business

Field-based information on variables and tracking indicators for ongoing review of opportunities/risks in your sectors of interest

Assessment of credit/investment quality of your portfolio



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