

CHINA'S LOGISTICS: RISING DEMAND BUT A SHORTAGE OF SUPPLY

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Because of its size and rapid growing economy, China is of paramount importance to the global logistics industry. Indeed, for many players, it is currently their key market for development and growth. However, the China logistics sector is also relatively immature. Overseas logistics companies were only permitted to set up wholly-owned business entities in China in 2005, four years after China's accession to membership in the WTO, but many have now expanded their business network across mainland China. Demand for logistics facilities has grown in tandem but the supply of modern logistics space remains limited. Out of China's total stock of 550 million sq m of good quality storage space, only 5.8 million sq m comprises modern logistics facilities[1]. Storage space per capita in China is a mere 0.38 sq m and its ratio to external trades is 0.19 sq m per US$1,000 trade in 2010. Even allowing for the less developed nature of the Chinese economy, with most manufacturing goods targeted for exports, the market is undersupplied with quality space at a time when demand is rising.

Good quality warehouse stock

	Estimated warehouse stock (GFA million sq m)	Ratio to total trade volume (sq m per US$1,000)	Warehouse stock GFA (sq m) per capita
China	550	0.19	0.41
Hong Kong	31	0.04	4.46
Japan	480	0.33	3.78
United States	1,600	0.38	5.16

Source: China Association of Warehouses and Storage, CB Richard Ellis estimates, CIA The World Factbook, Hong Kong Rating & Valuation Dept Property Review 2010

1 Modern logistics facilities meet requirements of modern logistics operation for guaranteed storage safety, optimal/flexible space utilization and high operational efficiency.

Over the next five years it is forecast that China will be the main driver of the global economy, with its contribution to global growth projected to increase from 30% in 2010 to 35% in 2015. China's growing clout as not only a producer but a consumer is altering the manner in which MNCs are drawing up business plans for the coming five years. Against this backdrop, demand for logistics facilities is expected to grow further. However, one major factor inhibiting this growth is the difficulty which specialist industrial developers and owner occupiers are currently encountering, on a nationwide basis, in sourcing land sites for the construction of logistics facilities. As a result, the current supply-demand imbalance is expected to continue in at least the short-term, creating the conditions for logistics assets to appreciate and undergo significant upward rental growth.

The appreciation of logistics rents and the shortage of land for logistics facilities poses a challenge for both the real estate sector and society as a whole, as logistics operators, retailers and manufacturers will factor in higher storage costs in the pricing of goods. The increase in storage costs, which accounts for about one-third of overall logistics costs, or 5.9% of the country's GDP, will add further pressure to the already high rate of inflation in China.

THE SOURCE OF GROWTH IN CHINA

Having served as "the world's factory" for the past 20 years, China is now re-orienting towards becoming, from the perspective of its own residents, the "world's biggest supermarket." The country has been stepping up its efforts to re-direct its model of development to make it less reliant on exports and driven more by the consumer spending of a rising middle class.

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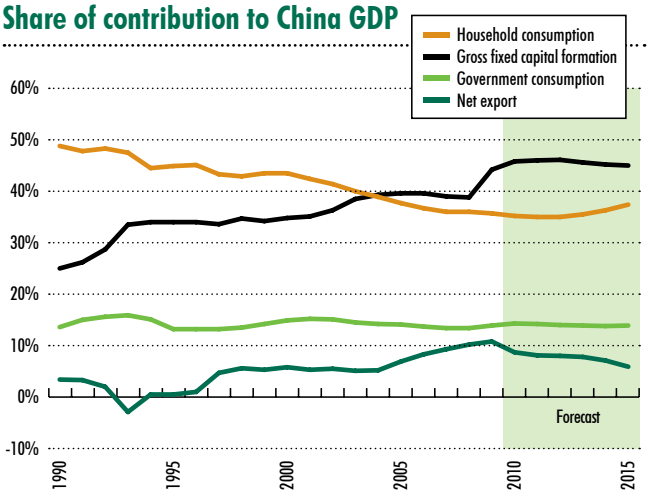
In line with this goal, China has been actively pursuing policies designed to both boost incomes and spur consumption, ranging from providing two extended golden week holidays around Chinese New Year and China National Day, to providing subsidies for residents of rural areas to purchase computers, home appliances and automobiles. The prominently announced national goals of supporting urbanisation, reducing income inequality, improving social security and healthcare and also improving infrastructure also broadly supports the objective of ensuring that more of the national income filters down and is spent by ordinary people.

Apart from stimulating domestic consumption, the huge economic stimulus package of 2009 which was devoted to investment in the form of infrastructure construction, and which has been reflected in the increase in contribution in gross fixed capital formation in the past two years, has also been a key driver of domestic economic growth, accounting for 44% of GDP in 2009. While China will continue to invest in infrastructure, the level of contribution in this sector has already begun to stabilise, due, in part, to the recent implementation of several new rounds of real estate market cooling measures.

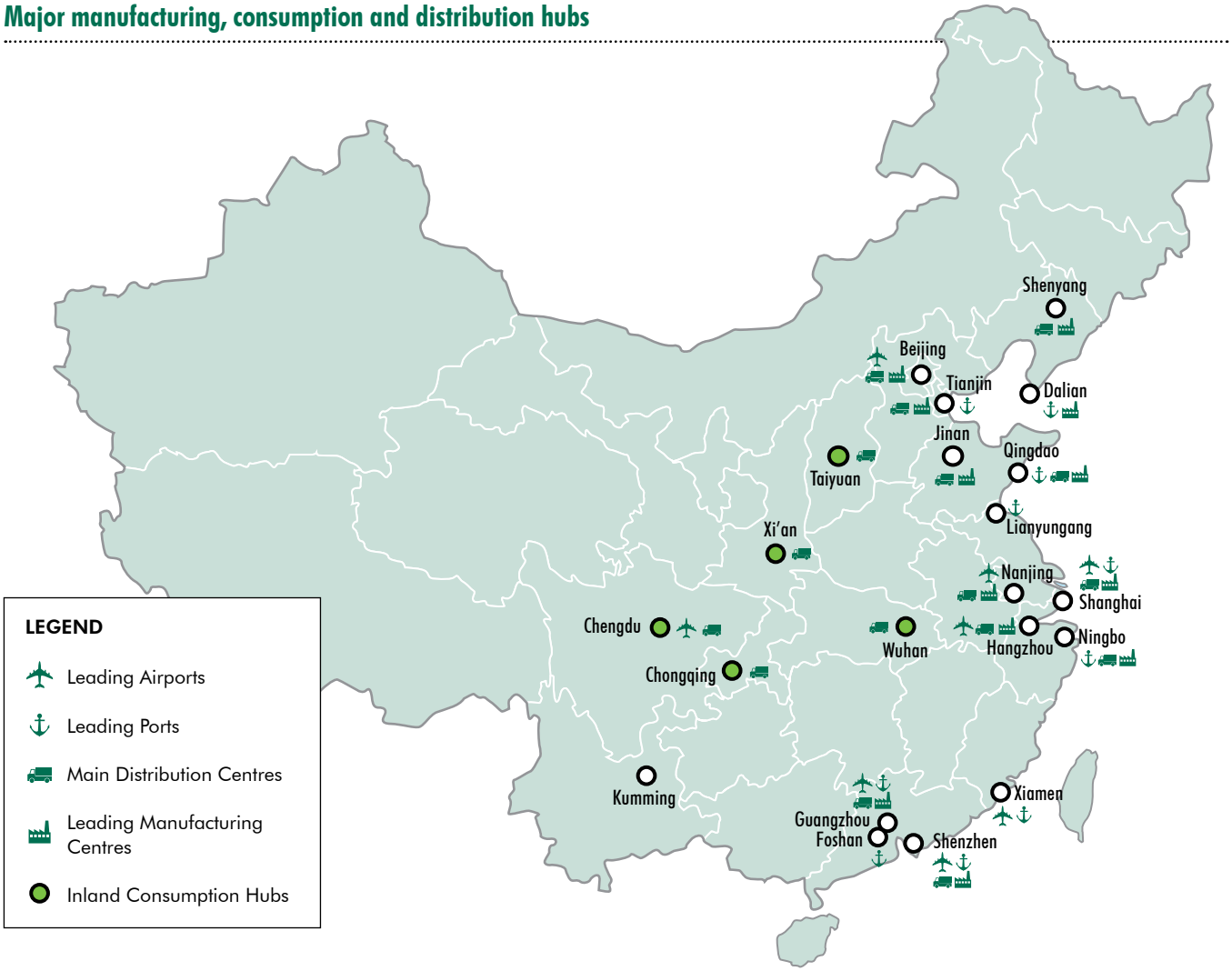
Amidst the continued brisk growth, the only sector which is making a diminishing contribution to China's GDP growth is net exports. However, this does not mean that

Share of contribution to China GDP



Source: China Statistics Yearbook, IMA Asia

Major manufacturing, consumption and distribution hubs



China is poised to play a smaller role in global trade, but rather that the growth in imports is expected to outpace the growth in exports. China is continuing to play a growing role in global trade, and it is projected that it will account for a larger share of global trade than the United States by 2012.

As a consequence of this expected change, despite the shift which is taking place in China's industrial structure, the country's key ports are expected to continue to see growth in freight volume. Five of the top 10 ports in the world are located along China's northern and eastern coast. These ports, comprising Shanghai, Ningbo, Tianjin, Qingdao and Shenzhen, already accounted for over 50% of China's total freight volume in 2009.

MANUFACTURING EXPANSION TO THE HINTERLAND

While many manufacturing facilities are located in areas close to these major ports, some manufacturers have already begun to move their operations into China's inland cities. This locational shift is being motivated by a number of factors, including upward pressure on industrial wages, Guangdong Province's stricter enforcement of national labour laws and selective outbreaks of labour unrest. One of the prominent examples is iphone manufacturer Foxconn's plan to eventually move all of the mass manufacturing to sites outside Shenzhen. The company is building huge plants in Henan and Sichuan, which are the home of most of the migrant workers now working in the coastal manufacturing bases, to accommodate 200,000 workers.

Apart from these factors, another reason for the shift towards the hinterland is manufacturers' growing interest in strengthening the development of their domestic sales network, reducing the need to ship goods through the key foreign trade ports, and placing more emphasis on domestic transportation that is targeted specifically at satisfying local consumption needs.

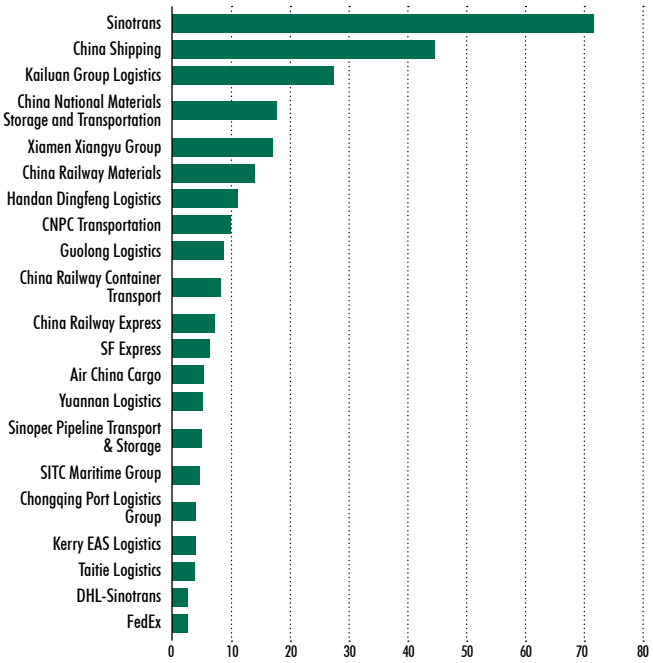
Along with the growth in their domestic retail sales, PRC-based retailers are similarly keen on expanding their national sales network. Local retail chains have experienced exponential growth over the past decade, with the total floor area occupied by retail chain operations in China having risen by 400% in 2003-2009 alone to 118 million sq m as of the end of 2009. Surprisingly, the pace of retail expansion was apparently totally unaffected by onset of the global financial crisis, with total floor space taken up growing by 16% in 2009.

Many international retailers have now developed their China operations significantly beyond the earlier stage when they were scrambling to establish firm footholds in second tier city markets. Many have already embarked on the third and fourth rounds of their expansion in China. Therefore, in order to support this new, inward-focused growth, cities in Central and West China have emerged as having much greater significance as both distribution and manufacturing centres. Cities such as Chengdu, Chongqing, Xi'an in the West and Wuhan in Central China have recently witnessed the increased growth of retailers and logistics companies setting up operations centres in their drive to more deeply penetrate the domestic consumer market. For example, in early 2009 e-commerce portal Alibaba announced plans to set up its national base in Chengdu and other inland cities to handle R&D, background operations, maintenance, disaster recovery and training businesses.

The confluence of all of these activities happening across the nation has collectively fed stronger domestic demand for logistics services. However, despite these growing requirements, the development of a modern logistics industry in China is still facing a number of challenges:

- The relatively low penetration of China's logistics sector by third-party logistics service providers. The amount spent on 3PL as a proportion of total logistics was only 2.7% in 2009, far lower than the 30% in Western Europe and 20.7% in the US.
- In the retail sector, only 9% use 3PL services, compared with 32% which are self-managed through retailers' own distribution networks.
- The fragmentation of the logistics market: China's top 20 operators only account for 6% of total logistics expenditure in the country.
- The general lack of a systematic approach to retail supply chain management, particularly among small and medium enterprises. According to a study conducted by Oriental Logistics, about 70% of small shops do not understand what logistics means to their business.
- China needs to raise the efficiency of its logistics sector as a whole, an improvement which is unlike to occur until the quality of transportation infrastructure in its vast inland areas begins to close the gap with the more developed coast.

China's leading transport and logistics enterprises 2009 (revenue, RMB billion)



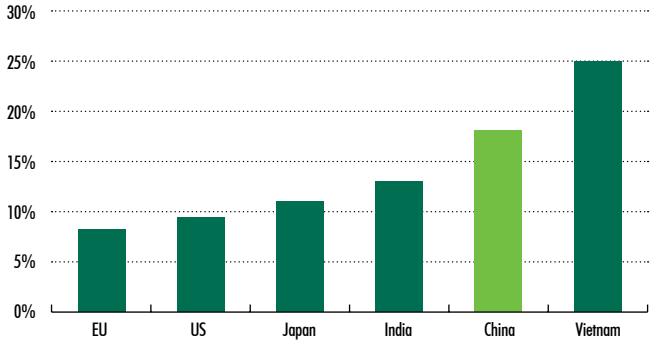
Source: China Federation of Logistics & Purchasing

AND YET, THERE ARE REAL SIGNS OF HOPE ON THE HORIZON

While there are signs that efficiency in China's logistics sector is already improving, costs are still far too high. China's logistics expenditure is still disproportionally large, accounting for 18.1% of GDP in 2009, compared to less than 10% in the EU and the US. Among the major Asian economies, China only compares favourably with highly inefficient Vietnam, where logistics costs account for 25% of GDP.

The Central Government has already stated that improving efficiency in the logistics sector is a key element of its national strategic policy. In its "Logistics Industry Restructuring and Revitalisation Stimulus Plan" issued in 2009, the Chinese government emphasised its aim to enhance the modern logistics service industry and lower total logistics costs as a percentage of GDP.

Total logistics cost as percentage of GDP (2009)



Source: KPMG

One solution to the problem is introducing more foreign technical know-how, including encouraging more China market penetration by overseas 3PL providers and assisting certain specialist overseas logistics facilities investors to expand their businesses in China.

CHINA IS PLAYING A 3PL CATCH UP GAME

Although the penetration rate of 3PL services remains low in China, this is the fastest growing logistics market sub-segment in China, and is being driven largely by the requirements of international companies, domestic FMCG retailers and online retailers which are more advanced in developing sophisticated supply chain management. Indeed, between 2005-2009, China's 3PL contract logistics market was the fastest growing logistics market in the world. The total value of contracts rose at 82% per annum to stand at US$25 billion by year-end 2009 and markets were forecast to grow at a whopping 111% per annum in 2009-2013, according to a forecast prepared by transport analytics firm, Transport Intelligence.

IMPROVED TRANSPORTATION INFRASTRUCTURE IN THE INTERIOR WILL LEAD TO BETTER EFFICIENCY

Another strategy to increase logistics efficiency is launching investment targeted at improving transportation infrastructure. Currently, road transportation accounts for about three quarters of total freight volume in China. To improve the national road system, China plans to build a national highway network to cover about 1 billion of China's population under the so called "7918 network", with 7 highways connecting Beijing to other cities, 9 arterial highways from north to south and another 18 highways connecting the east and west.

However, the reliance on roads for freight cargo is expected to decrease in the future as China is investing heavily to improve its railways and inland river port facilities, both of which are more economical forms of transportation than roads.

For railways, the major project is the national high-

speed rail system, a scheme designed as a mammoth, national-scale network connecting the coastal areas and China's inner regions. The system takes "four major vertical lines and four major horizontal lines" as its main skeleton and comprises a framework connecting a total of 9 major conurbations. Upon its completion in 2020 the network will provide a total of 16,000 km of high-speed railway line. As more high-speed rail lines are completed and become operational over the next decade, more existing rail lines will be converted from passenger/freight use to tracks specifically designated for transporting cargo. Waterways will be an important transportation infrastructure for inner cities along the Yangtze and Yellow Rivers and it is expected that riverine ports will serve a total of 20 provinces by 2020.

The quantum of air cargo used for external trade shipments is still quite small in China as many airports in inland cities have not entered into multilateral agreements to open international air transportation routes. This is an area the Civil Aviation Administration of China has to work on in the coming decade. That being said, the number of civil airports is expected to increase quite substantially in the years ahead in order to handle the rapidly increasing passenger volume.

Since 2008 China has begun adopting a more scientific approach towards planning urban development. While previously the emphasis was on the development of several mega cities, the new thinking adopts a more inclusive approach and encourages a more balanced regional development. Besides the three existing economic powerhouses, the Bohai Rim, the PRD and the YRD, an additional six city clusters, which are at an earlier phase of development, are being encouraged to catch up. The key implication of this changed approach to urban planning is that infrastructure planning will be considered on a regional level, rather than merely on a city level, and that this will force local/city governments to adopt a more coordinated and inclusive approach to industrial development rather than competing with each other to attract the operational presence of the same set of secondary or tertiary industry players.

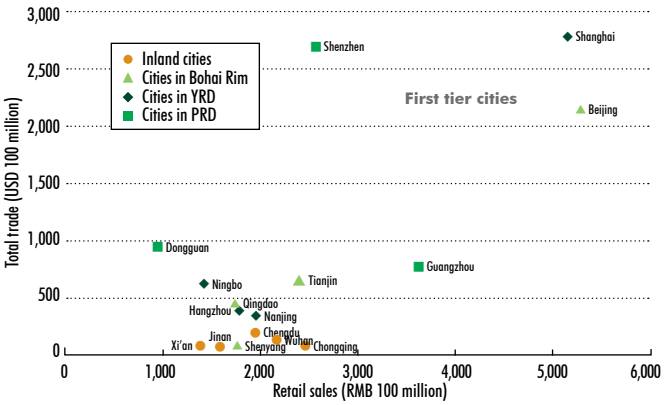
While narrowing the development gap between coastal city clusters and their inland counterparts is one of the key targets for the Beijing government over the coming decade, economic activity will nevertheless remain highly concentrated in first tier cities. As illustrated in the graph plotting the size of retail sales against total trade volume in 2009, Shanghai, Beijing and Shenzhen have recorded a much higher volume of trade and retail sales compared to other cities, a trend which is expected to persist, at least over the short-term.

However, inland cities have recorded higher growth over the past three years and this trend is expected to continue over at least the medium term future. Looking at individual city clusters, the growth of second-tier cities is also typically higher than leading cities in the cluster.

SHORTAGE OF MODERN LOGISTICS FACILITIES

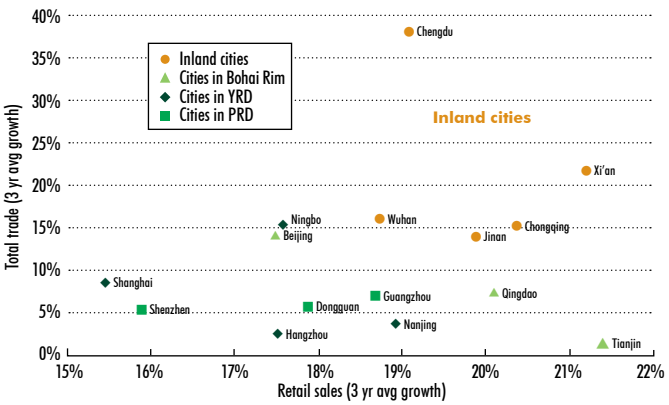
Seeing that inland cities have higher growth potential, major overseas logistics property investors have been expanding across China. Shanghai and its neighbouring city of Kunshan currently have the largest concentration of international logistics property investors. Beijing, Guangzhou, Shenzhen and Tianjin are also home to a significant quantum of modern logistics facilities while in

Size of retail sales and trade volume



Source: Local statistics bureaus

Three year average growth in retail sales and trade volume



Note: 3 year average growth between 2007–2009

Source: Local statistics bureaus

other cities, warehousing is predominately in the form of simple concrete boxes. The total stock of modern logistics facilities in China is just 5.8 million sq m, a figure which is disproportionately low for a nation of 1.3 billion people.

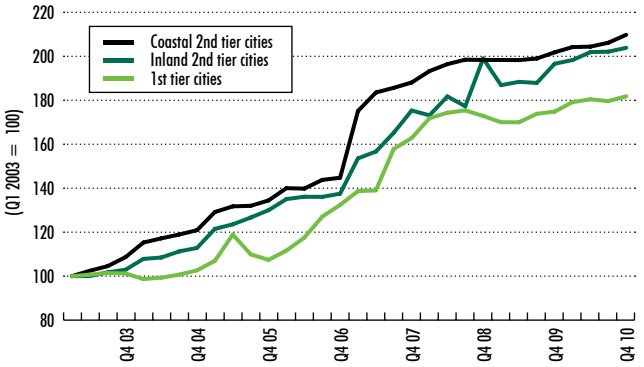
While international logistics investors can clearly see that there is ample room for development in China, the future supply pipeline is quite thin due to the fact that investors are faced with difficulty in finding suitable land development sites zoned for logistics use. The major reason for this is the lower preference for allocating land for logistics use by local government authorities.

WHY IS THERE A SHORTAGE OF SITES FOR LOGISTICS FACILITIES?

The sale of development sites for commercial development is the main source of revenue for local governments. However, prices fetched for industrial sites are much lower than those commanded by residential or commercial sites. Local governments thus prefer to allocate residential and commercial zoning rather than industrial zoning when planning new development areas. Even within industrial and high-tech parks, campus offices, factories and R&D facilities are projects that will bring in revenue and boost employment. Local governments can also augment their tax revenues from these businesses. On the other hand, the increase in business flow and employment which directly results from developing storage facilities is limited. In many cases, local authorities simply view logistics as a kind of ancillary service. This, in turn, results in a lower preference on the part of local government authorities to allocate sites for logistics operations. It is not only overseas investors who are confronting this problem, with large State-owned Enterprises (SOEs) facing similar difficulties in obtaining sites for housing their own logistics operations.

Another factor contributing to the shortage of logistics land is land hoarding by many domestic SMEs, which have been acquiring industrial sites over the past few years in anticipation of the continued capital appreciation of land values and the increasing scarcity of land. This trend is most notable in the Hangzhou-Ningbo area of the Yangtze River Delta. SMEs engaged in this practice use part of sites they acquire to construct facilities for self-use

Industrial land price index

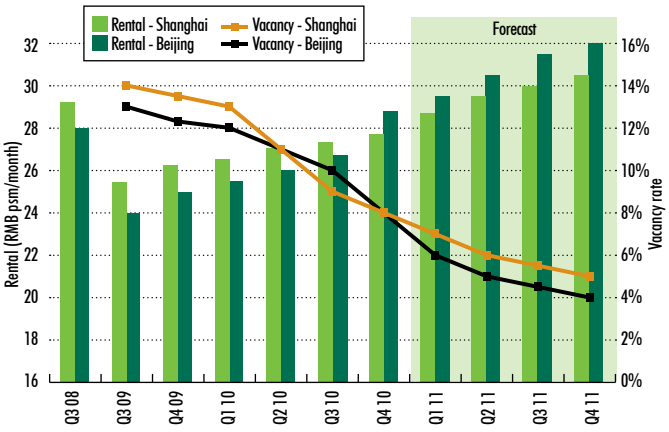


Source: CBRE Research

and lease the rest as warehouses to other companies for low rents. The policy that requires industrial land to be transferred only through bidding, auction or listing above a minimum land price commencing from June 2007 has also help pushed industrial land prices up over the past few years. In the past five years, industrial land prices in China appreciated by about 60-70% across the board.

Higher land costs coupled with strong demand have combined to support growth in logistics rentals throughout 2010. Analysed by city, first tier cities have seen a clear downward trend in logistics rents during late 2008 and the first half of 2009 under the impact of the global financial crisis but recovered quickly thereafter. Rentals in Shanghai rebounded 5% in 2010 but are still about 5% lower than the level before the GFC. Beijing's rentals are growing even faster, at a rate of 15.2% in 2010. Brisk absorption also brought a big compression in vacancy which is now around 8% in major logistics parks. Availability is even tighter in areas near key port and airport facilities. We expect that rents will have another 10-15% growth in these cities and vacancy will decline

Logistics rental and vacancy rate - Shanghai vs Beijing



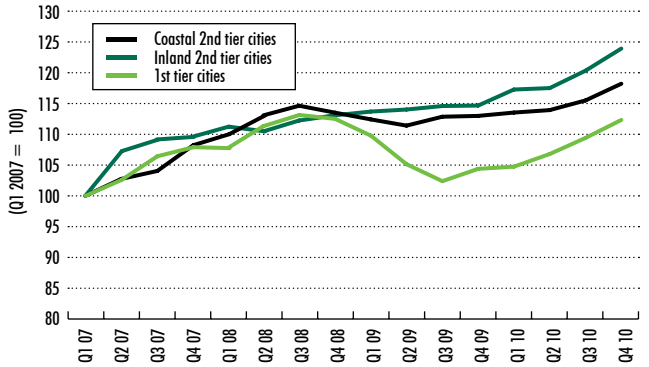
First tier cities: Beijing, Guangzhou, Shanghai and Shenzhen

Coastal Second tier cities: Dalian, Hangzhou, Ningbo, Nanjing, Qingdao, Shenyang and Tianjin

Inland second tier cities: Chengdu, Chongqing, Wuhan and Xi'an

further, making it even more challenging for occupiers to source suitable space to cope with their business growth.

Logistics rental index



Source: CBRE Research

The economic downturn appears to have had only a limited impact on rentals in inland second tier cities. The simple reason for this is that demand in these markets is driven by domestic consumption which remained largely intact during the economic downturn.

Rental levels in China's second tier cities are still quite low compared to leading cities such as Beijing, Shanghai and Shenzhen, although a number of them are catching up at a rapid rate. However, as our analysis reveals, the drivers of demand for logistics facilities and the economics of operating them are quite different geographically.

Since Beijing is the political centre of China, most of the country's SOEs are headquartered there, giving the city's an additional SOE dimension beyond simply being the capital of the PRC. The SOEs which are headquartered in Beijing are generally quite conservative about outsourcing logistics operations to 3PLs and are not presently under pressure to do so. Compared to Beijing, Tianjin is more inclined to attract overseas players into its local industrial / logistics sector. In addition, Tianjin is the major port city of North China and thus naturally generates high demand for logistics facilities. The rental gap between Beijing and Tianjin for such facilities is therefore not significant. However, the rental gap between these "first tier logistics cities" and "second tier logistics cities in the Bohai Rim" can be quite substantial.

In the Yangtze River Delta, numerous facilities are clustered in and around Shanghai. As the logistics zones near the Yanshan port and Pudong airport have already been filled for the most part, a large proportion of new development activity is now focused on Western Shanghai and adjoining cities such as Suzhou and Kunshan. Down in Zhejiang, although Ningbo Port also has high container throughput, companies in this part of this region are mainly private enterprises / small manufacturers and thus have smaller requirements on modern warehousing.

In the Pearl River Delta, most of the activity is concentrated in Shenzhen which has a deep water port and benefits from its close proximity to Hong Kong. Guangzhou also has river ports to handle exports of automobiles and other products, but logistics demand in the provincial capital is largely driven by domestic consumption. Among the second tier cities, the steepness of recent growth in demand in Foshan has been amongst the most outstanding in the PRD area, and this has grown more noticeable as Foshan's bonds with Guangzhou have grown stronger. Although the average rental level in Foshan is lower than that in Guangzhou, the rental differential for prime logistics facilities in key economic development zones in the cities of Foshan and Guangzhou is very little.

Western and Central China urban hubs are different from Coastal cities, where logistics demand is largely driven by external trade. By contrast, in Western China demand is driven more by retail consumption. Fast Moving Consumer Goods (FMCG) companies and online retailers in particular are growing rapidly and their requirements for logistics facilities are trending higher. Within Western China, Chengdu is the preferred location for setting up a regional distribution hub. Multi-tenant logistics centres can easily find tenants.

WAYS TO ENHANCE THE ECONOMIC VALUE OF LOGISTICS LAND

While the Central Government has clearly prioritised the development of a modern logistics sector, the scarcity of logistics sites is expected to remain as the key issue confronting international investors for some time. Some have already begun to adjust their business development strategies for China to work around this limitation.

One of the trends is the emergence of multi-storey warehouse facilities. Currently, the majority of China's warehouses are of the single-storey type, but overseas investors have already started to develop multi-storey warehouse facilities in supply-constrained areas such as Waigaoqiao Bonded Zone in Shanghai and Guangdong

Development Zone in Guangzhou. However, outside the key industrial parks, single-storey facilities remain the major configuration and are still the preferred configuration for tenants with large-scale operations.

While developing logistics sites as multi-storey warehouses can boost the accommodation value of such sites, the operational efficiency of these developments' upper floors remains a major concern for prospective occupiers. This is a particularly pressing issue for those which only have cargo lifts to serve their upper floors. Rents for upper floors are often only half of those charged for ground floor space. Multi-storey projects currently in the pipeline generally provide ramp access to floors. The rental gap between those floors with ramp access and ground floors is much lower at around 10%, as the efficiency of operating from the upper floors is not much different from that when operating from the ground floor.

Investors have also turned more active in searching for occupiers for build-to-suit (BTS) projects, which provide a more certain income flow. It is easier for BTS projects to secure sites from local governments as these projects generally are accompanied by substantial FDI commitments from large corporations in their localities. For large corporations, BTS solutions ensure the delivery of the right facility to cope with their business growth. One major example of this trend has seen Global Logistics Properties develop four BTS distribution centres in Shanghai, Guangzhou, Hangzhou and Qingdao for Yum!, the operator of KFC and Pizza Hut.

CONCLUSION: SHORT TO MEDIUM PROSPECTS OF THE CHINA LOGISTICS SECTOR

The construction of new highway and railway systems will radically alter the landscape of many Chinese cities and stimulate the emergence of new areas as the preferred location for logistics and manufacturing. Specialist developers and investors in logistics facilities will be increasingly focused on urban fringe areas or even in satellite commercial/industrial cities which lie in an orbital relationship around major urban areas, but which are expected to enjoy improved accessibility when future highway projects come on stream.

Export-oriented companies will continue to account for the bulk of demand, particularly in coastal cities and areas near ports. 3PL providers are growing and increasing their penetration across China's various geographies. FMCGs and online shopping operators are expanding as they improve their supply chain management. Demand is consequently expected to outstrip supply across the nation in the coming year. The China logistics sector is expected to mature rapidly in coming years and witness the emergence of a broader but increasingly efficient and competitive landscape.

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