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China 2015: Transportation and Logistics Strategies

Leadership requires innovation, expansion and redesigned networks

As China's economy grows, so grows its transportation and logistics industry. China is becoming a more mature and self-confident country and a driving force in the new global economic structure, and this is bringing new challenges and opportunities to the five sectors of the country's transportation and logistics industry—express, road freight, air freight, contract logistics and international freight forwarding. How can Chinese companies improve the country's transportation and logistics environment? Leadership in this industry requires innovation, expansion and redesigned networks.

China's extraordinary economic growth continues. Even as the global economy struggles to recover from the financial crisis, various statistics indicate that China's economy has emerged resilient, with rapid growth expected to last into the foreseeable future.

In this context, the transportation and logistics industry in China is also poised for major growth over the next five years, portending significant changes for its five main segments: express, road freight, air freight, contract logistics and international freight forwarding *(see figure 1 on page 2)*. As the boundaries between these segments blur, consolidation will accelerate and network coverage and density will grow. At the same time, an increasing focus on sustainability will add new pressures to cost structures.

Many transportation and logistics companies have already begun adapting their strategies and tactics to focus on more innovative business models that will help them succeed in a changing environment. They are adopting new growth strategies, redesigning their networks, and improving their cost structures to meet the new challenges.

Industry Trends in China

Despite the Chinese economy's extraordinary success, China's transportation and logistics industry as a whole remains in the early stages of development. Fragmentation and intense competition highlight a market in which competitors offer similar and limited services.

Yet Chinese macroeconomic trends will continue to have a major impact on the industry as transportation and logistics are vital for making the economy tick. What macroeconomic and industry-specific trends will shape the transportation and logistics industry in the next five years?

Economic growth and domestic consumption. Although post-recession economic struggles continue both globally and domestically, China's gross domestic product (GDP) is still surging. GDP grew 8.7 percent in 2009, and the Asian Development Bank predicts yearly growth of

Figure 1

As China's economy grows, its logistics market is expected to reach $450 billion

Note: The eurozone includes Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain.
Sources: International Monetary Fund, A.T. Kearney interviews, Boeing forecast; A.T. Kearney analysis

more than 9 percent in 2010 and 2011. As the transportation and logistics industry matures, its relative size and development will more closely correlate with GDP.

Foreign trade remains strong despite the economic downturn, during which import and export volumes fell by half from 2008 to 2009. Chinese government measures have stabilized imports and exports, including tax rebates, credit insurance and financing guarantees. Despite more trade protectionism in some foreign markets, China's position as the world's factory has changed little. There is no other country that can offer the scale, ecosystem (including tier one, two and three suppliers), infrastructure development and political stability that China can.

Domestic consumption is also rising, and it will be a focus of China's economic policy over the next several years. This includes balancing income distribution and basic public services, integrating urban and rural areas, and reforming the fiscal, tax and financial systems. The overarching goal is to increase household consumption ratios from 35 percent today to 50 percent within five years. Growth in domestic consumption will naturally increase demand in all segments for logistics and transportation services in China.

Improved infrastructure—particularly in the west and north. China's State Council has given first priority to more than 20 cities in nine regions for an infrastructure upgrade in the next two years, with improvements ranging from expressways and airports to seaports and express transshipment centers. The moves have already improved operational efficiencies in China's transportation and logistics. Other recent infrastructure improvements that have helped the industry include a wave of new regional logistics distribu-

tion centers, logistics parks, modern warehouses and improved distribution facilities.

Three major geographic clusters have been the traditional focus of transportation and logistics networks: the Pearl River Delta, the Yangtze River Delta and the Bohai Rim. Future network coverage will expand well beyond these traditional spots—particularly to the west and north *(see figure 2)*. In these developing regions, new roads and expressways—on top of the already-enormous growth the region has seen in the past several years—are increasing the need for transportation and logistics. According to the Ministry of Communications and Transportation, road freight rates in the west grew to more than 710 billion tons per kilometer in 2008, a nearly five-fold increase since 2000.

Because of these investments, consumption in the west and north is expected to grow. In the first three quarters of 2009, retail sales of consumer goods in the west grew 19 percent year-over-year, 3.9 percent higher than the national average; in the northeast, the rate was 18.4 percent, according to the Regional Economy Department of National Development and Reform Commission. Overall, stable growth in consumption will bring more opportunities for the transportation and logistics industry.

Figure 2

Network coverage in China will move north and west

Source: A.T. Kearney analysis

More distribution models and e-commerce. Changing distribution models and e-commerce will affect network density. iResearch reports that the total market size of e-commerce in China increased from $3.8 billion in 2006 to $27.7 billion in 2008.[1] Furthermore, companies' distribution channels are moving from dealership models to multi-channel and direct sales models, requiring higher-density networks with quicker response times. Taobao, the online portal with transactions of almost $12 billion in the first half of 2009, is a typical example. Taobao's logistics network now covers more than 90 percent of China's cities, counties and districts—a sharp contrast to traditional networks, which typically focus only on tier-one and -two cities.

Some segments will have to adapt to survive. Road freight, currently characterized by simple offerings and poor operations, will have to improve its products and services as other segments encroach and consolidation ramps up. Meanwhile, market expansion will open up new opportunities for air cargo, especially as new airports open and foreign trade routes expand.

Customers changing behaviors. As customers' demand more, companies in China are focusing on their core competencies, such as marketing, research and development (R&D) and manufacturing, while outsourcing secondary competencies such as transportation and logistics to third-party providers that can consolidate resources more effectively. In a recent A.T. Kearney survey of executives at more than 200 Chinese shipping companies, 81 percent of executives say they are outsourcing their transportation needs, and 47 percent are outsourcing warehousing.[2] Executives are increasingly viewing logistics as a strategic area that can offer a key competitive advantage, and therefore setting higher requirements on service levels and offerings. Additionally, price is becoming less important when selecting transportation and logistics service providers, as quality of service now rates

Figure 3

Service will be more important than price by 2013

Source: A.T. Kearney-Tongji University study of corporate logistics, 2009

[1] *All monetary amounts are U.S. dollars.*

[2] *For more information, see "China Pursues Excellence in Logistics," at www.atkearney.com.*

as most important, followed by reliability, flexibility and range of product offerings *(see figure 3)*.[3]

The result will be more integrated, sophisticated and higher quality offerings, including new supply chain synergies and basic services such as just-in-time production logistics, vendor-managed inventory, product repackaging, spare parts testing, category management and supply chain financing. In domestic express, characterized today by low-cost, commodity-like services, companies are responding to customers' demands for safety and reliability. In contract logistics and road freight, leading logistics companies are placing more emphasis on reliability and security. Margin pressures in air freight could bring integrated products such as time-definite, door-to-door services, which only express companies offer today *(see figure 4)*. International freight forwarders could extend their services to become more like contract logistics firms, with many offering first- and last-mile services.

Low-carbon rules will force transportation and logistics leaders to make environmental protection a core goal.

Industry consolidation. A maturing transportation and logistics industry in China will undoubtedly see more mergers and acquisitions, and eventually a more concentrated market

Figure 4

The express and air cargo markets are converging

	Express		Air cargo	
	Standard express	**Deferred express**	**Premium air cargo**	**Standard air cargo**
Most important	Less than 50 kg	Up to 2,500 kg; most are less than 50 kg	All weights, 70% are more than 100 kg	More than 50 kg, no upper limit
Service speed	1 to 2 days	2 to 4 days	3 to 6 days	2 weeks
Documentation	All-in-one	All-in-one	May adopt all-in-one	Multiple documents
Daily pickup	Yes	Mostly yes	In some cities	No

Source: A.T. Kearney analysis

[3] *A joint study of corporate logistics by A.T. Kearney and Tongji University in 2009.*

(see figure 5). In this way, local players will be able to compete with foreign competitors, drive down costs and increase profitability. Diversification also helps manage risk. Future consolidation will be about "value growth" as companies focus on becoming stronger while also becoming larger *(see figure 6)*.

As Chinese companies expand rapidly, their logistics requirements will expand beyond coastal cities, with broader national network coverage and consistent, reliable service becoming key differentiators. From our survey, we know that companies in China have an average of 12 transportation providers and five warehousing providers, with many respondents saying their firms intend to consolidate providers in the coming years.

These and other factors are likely to push consolidation within and between segments of this industry, according to the features of each segment. For instance, horizontal consolidation across segments with higher network costs and more standardized products, such as express, air freight and road freight transportation, will reduce costs. At the same time, vertical consolidation in contract logistics or freight forwarding could prove lucrative. This can be accomplished either by entering new segments (such as chemical contract logistics) or developing new capabilities along value chains (such as overland transport for international freight forwarders).

Low-carbon rules. A push to reduce carbon emissions appears inevitable, and transportation and logistics leaders will have to make environmental protection a core goal.

China's government has already included compulsory emissions targets in medium- and long-term planning for the national economy and social development, including the development of

Figure 5

China's logistics market is in the early stages of consolidation

Source: A.T. Kearney analysis

Figure 6

Consolidation will help companies move toward "value growth"

Source: A.T. Kearney analysis

a low-carbon transportation system. "Euro III" vehicle standards are now required for major Chinese cities, which means road freight companies will have to upgrade their vehicles to comply. Some companies have gone further; for example, TNT has launched electric delivery vehicles in China.

Other regions, particularly Japan and Europe, have an early start in this area. Japan's *Auto Carbon Dioxide Emission Restriction Law* in 1992 specified five qualified vehicle models that companies can use and began the transformation of the trunk-line transportation model. Europe has defined green tags for transportation, loading and unloading, and management processes, and will soon impose a carbon-emissions tax.

How to Respond

In the face of these industry changes, transportation and logistics companies must focus on four areas:

Become more innovative. Most transportation and logistics providers in China have focused almost exclusively on growing larger with very little focus on growing stronger. The result in many segments has been costly price wars. As the market evolves, the leaders in this industry will be those that best meet customers' changing needs; they will find vital first-mover advantage and, eventually, higher margins.

What are the best, most innovative ways to meet customers' needs?

Offer value-added services. Future industry leaders will do far more than merely move goods from one place to another. They will offer new, value-added services based on existing capabilities to match customers' increasing demands and capture market opportunities. Information technology (IT) will become a major differentiator as requirements become more complex.

General services are no longer enough for most customers—or for logistics providers, given

the competitive intensity and low costs of switching providers. Retail giants expect logistics providers to do more, such as sourcing simple goods, warehousing, inventory management, and distribution and delivery. Some are even asking express providers to build up simple repair capabilities to speed up the operation of reverse logistics. In high-tech, customers want logistics providers that can conduct product testing and secondary packaging during the warehousing and transportation processes. More local apparel producers are attempting to bypass intermediates to meet their customers directly, and want logistics providers that can store, pick up, sort, pack and distribute various products, according to customers' changing needs at sales outlets.

Move to new geographic regions. The expanding opportunities outside of China's traditional centers can offer some great opportunities. Global consumer goods giant Unilever recently closed down six factories in Shanghai and a black tea factory in Guangdong, and relocated them more than 450 miles west at the Hefei Economic and Technological Development Area. Hewlett-Packard opened a computer manufacturing base in Chongqing in southwest China, where annual production capacity is four million units. Moves like these illustrate where logistics service networks need to follow.

Explore other transportation modes. Improved expressways and railways will certainly divert traffic from the air and traditional railway markets. Competitive cost pressures and energy-saving requirements may also accelerate change. Future leaders will take advantage of this.

Expand as appropriate. There are several common reasons that companies in all industries grow. One is to provide better services for customers—for example, by expanding geographically. Another is to seize potential opportunities in new markets. A third is that size can reduce unit operating costs and fight competition.

These factors are at play in China's transportation and logistics industry. The appropriate expansion approach in China will match a company's development stage, the characteristics of its segment and the competitive landscape. Horizontal consolidation (among companies occupying the same part of the value chain) can significantly reduce costs in segments where service products are more standardized, including express, air freight and road freight transportation. Vertical consolidation (among companies in different stages of the value chain) may be better for contract logistics and freight forwarding, where new capabilities could make a competitive difference.

We recommend the following three expansion approaches in China:

Pursue strategic acquisitions. Firms use strategic acquisitions to acquire the competitive resources they need, such as increased market share, new sales channels, improved customer relationships, more networks, and new branding and cost synergies, among others. When competition is already intense and markets are fragmented, it is possible to further strengthen your competitive position by acquiring the right targets and altering the competitive landscape. Strategic acquisition is also used to enter new regions or industries. A main challenge in China is often the lack of quality candidates and information, so thorough due diligence and a well-crafted game plan are musts.[4]

Form strategic alliances. Alliances are a good way to take advantage of the resources of different members, but the level of actual coordination among the members is often difficult to predict and control. Alliances can help overcome market access barriers and enter an unknown market. For

[4] *For more information, see "Making Your Chinese Merger Marriage Work" at www.atkearney.com.*

example, a freight-forwarding company may use an alliance to reach overseas networks it cannot join otherwise. Or companies that compete in some segments but complement in others may form alliances to strengthen their overall market competitiveness. However, considering the different cultures and maturity levels, alliances are always a challenge in China.

Grow organically. Organic growth provides full control of the strategies and goals without external interference, and allows best use of resources. But organic growth is slow, and time is of the essence, particularly in rapidly growing markets. Valuable opportunities can slip away when attractive takeover targets are surrendered to more aggressive rivals.

Organic growth is particularly suitable during the early stages of a market, when there is very little competition, rapid integration is well into the future and rivals are not strong enough to acquire other firms. Companies involved in joint ventures or strategic alliances often view organic growth as a way to maintain freedom in decision making after gaining a full understanding of the market and building the capabilities to grow independently.

Considering company cultures and maturity, alliances are always a challenge in China.

Chart the network. Expanding to new regions creates new logistical needs, which means that operational networks must be laid out based on the direction and volume of customers' freight.

There are several key considerations in network layout. Where should national and regional operation hubs and cargo collection outlets in cities be set up? What are the best routes, in order to balance volumes and load (such as a mix of heavy and light shipments)? How should the mix between owned assets and resources and those that are outsourced (especially because given volumes are unbalanced in China) be balanced? Also important is how and where to set up sales and delivery networks, defining the exact routes, rules and standards for all distances and overall service quality. Developing contingency plans regarding operation routes, resource allocation and field activities are also vital to maintaining stable operations.

Responsive, flexible operations networks are the basis for meeting customers' changing demands and managing costs, and can give a transportation and logistics company up to three years of market leadership. For example, network costs for road transportation companies typically represent up to half of total costs, but these costs can be reduced by up to 10 percent by managing the network more effectively. The most common approach is to combine a hub-and-spoke network with a point-to-point network to balance cargo volumes and traffic. Network optimization can also help cut unnecessary waiting times at a hub, reducing total transportation time by up to 30 percent.

Implementing a network approach might mean going back to the basics—improving network management with support from human resources, network-optimization tools, a stronger IT system and organizational restructuring.

Improve the cost structure. Costs are a serious issue in the transportation and logistics industry, which is not highly profitable. Some segments, such as air freight, have long lingered around the breakeven point. Cost pressures will increase in the coming years as competition increases and low-carbon rules become the norm.

The following initiatives can help reduce costs:

Go lean. Lean processes refers to streamlining and optimizing internal processes, using key performance indicators (KPIs) to drive down variable costs and improve operational efficiencies. For example, an air freight company can implement a lean mechanical maintenance process to improve costs and efficiency, while a contract logistics firm can use lean warehousing to improve utilization and cut operational costs.

Adopt strategic sourcing principles. Sourcing is not simply about getting a discount by consolidating volume. Strategic sourcing examines the total cost of ownership and includes various tactics that drive down costs while offering a different way to work with suppliers.[5]

Improve asset management. All transportation and logistics companies have vital assets—such as vehicles and warehouses—that guarantee the delivery of quality, flexible services. Asset management ensures that costs are calculated accurately, asset structures are precise and cash flow is exact.

Restructure the organization. Dividing or consolidating functions, adjusting organizational structures and incentive mechanisms, and establishing a system of KPIs will reduce overhead, generate transparent internal coordination and clear accountability, and ultimately improve overall operational efficiency and flexibility.

Cashing in on Rapid Growth

Profound changes are ahead for the transportation and logistics industry. Strong strategic planning and a firm implementation roadmap will be vital for success in this increasingly competitive industry. As China's economy continues its rapid growth is assured for the transportation and logistics industry. But who will emerge from the pack?

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[5] *For more information, see A.T. Kearney's Purchasing Chessboard at www.purchasingchessboard.com.*

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