



The transportation and logistics sector touches every individual and every industry in China. China's recently approved 12th Five-Year Plan could have a significant impact on companies and investors in the sector. The key emerging themes of the environment and clean energy, continued urbanisation, and focus on domestic consumption will resonate in the industry.

### **Significant implications for the sector**

- Whilst the transport and logistics sector is not one of the seven strategic investment areas highlighted in the 12th Five-Year Plan, the themes from the latest plan could have a significant impact on the sector.
- The transportation and logistics sector will play a role in helping to reduce carbon emissions; the continued shift of business and development in western China will change transport demand; the planned infrastructure and housing improvements will impact movement of raw materials, and the switch of focus to domestic consumption, together with the emphasis on the hi-tech and service sectors, will affect the pattern of movement of people and finished goods.
- The switch of focus from exports to domestic consumption could have profound implications for the sector. At a basic level it could have a dampening effect on the level of international exports and imports, but boost domestic transportation demand for both goods and people.

### Key targets in the Five-Year Plan

- Length of highway network will reach 83,000 km
- Length of high-speed railway will reach 45,000 km
- A new airport will be built in Beijing
- Total number of airports will rise from 175 to 220

### Environmental targets: indirect effect on the logistics industry

- Increase non-fossil fuel use to 11.4%
- Reduction of energy use per unit of GDP: 16%
- Reduction of CO<sub>2</sub> emissions per unit of GDP: 17%

- The Five-Year Plan's emphasis on clean energy has been noted by companies in the sector, as the transportation and logistics industry is a significant carbon emitter. The sector will have to consider how to incorporate green technology in order to help meet the low carbon emission targets. The development of 'clean vehicle' manufacturing capabilities is likely to help, and the improved inland waterways and rail infrastructure should help to limit the otherwise nearly exponential expected growth in road transport.
- The aim to move the Chinese economy up the value chain to more service and hi-tech oriented business will require upgrading to the road transportation and logistics sector, which is currently fragmented and underdeveloped. The need for more modern systems, IT and management practices and more sophisticated and integrated logistics solutions is likely to spur consolidation, outsourcing and investment.

### Sub sector implications

#### *Shipping*

- Shifting the focus from manufacturing to services could mean less export (impacting the container shipping market) and less import of raw materials (impacting the bulk shipping market). However, countering this is the need for continued raw material imports to support ongoing infrastructure investments in the country, and the newly announced construction and redevelopment of low-cost housing which will continue to support steel (and associated iron ore) imports.
- The focus on development of cities and business in western China is likely to continue to boost transportation via inland waterways, especially along the Yangtze River. The central government will continue to focus on improvement of inner river transportation infrastructure: China's 110,000 km of inland waterways is already a key feature of the country's transport industry, representing an estimated 67 percent of marine freight volumes in 2010.<sup>(1)</sup>

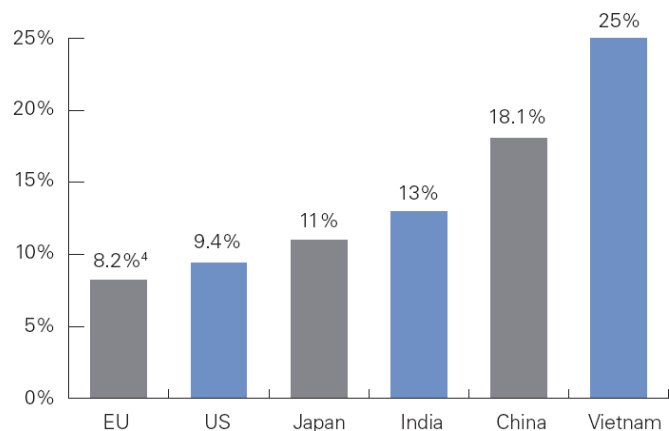
#### *Rail*

- China is giving high priority to its railway network. Its plans for passenger rail include
  - extending its high speed rail network to 45,000 km by 2015
  - connecting every city with a population of at least 500,000
  - investing RMB 700 billion annually in rail projects.
- Other rail developments have also been announced, including a railway linking Sichuan Province and the Tibet Autonomous Region.
- Rail freight transportation is an attractive low-carbon option, and it is likely that the key theme of sustainability in the 12th Five-Year Plan will provide a further boost to rail freight. Offsetting this, a shift away from coal for power generation could have a negative impact on the rail industry (and the bulk shipping industry) as 80 percent of coal for power plants is currently transported by rail.

## Road transportation and logistics

- In the 12th Five-Year Plan, China will continue extending its road network. The government's freeway development plan calls for the construction of seven new freeways originating from Beijing, nine new expressways running north to south, and 18 'thruways' running east to west. For more rural areas, the stated objective is to ensure that by 2015 all townships and 90 percent of villages are accessible by vehicles. (As at the end of 2010, 1,200 townships and 120,000 villages had no paved roads).<sup>(2)</sup>
- The highway building programme in particular is needed to support efficient transportation of goods and people further west in the country, and support the objective of greater domestic consumption. Despite currently having 74,000 km of freeways (compared to 100,000 km in the US), congestion and poor road speeds are a significant factor in the inefficiency of China's domestic transport and logistics industry, with logistics costs representing around 18 percent of GDP, compared to around 8 percent in the EU and 9.5 percent in the US.<sup>(3)</sup>
- China's logistics industry is fragmented and has variable quality and safety standards. In order to shift China's economy to services and high-tech sectors, and away from the traditional "workshop" manufacturing industries, the logistics industry needs to improve efficiency, quality and safety standards. This will require
  - investment in IT
  - introduction of more modern structures and management approaches and
  - consolidation in the industry.
- China's goal to upgrade its logistics industry is likely to provide opportunity to international operators, and logistics is listed as a special service sector where "steady steps" will be taken to open up to foreign investors.
- Logistics outsourcing (to third-party logistics providers) is currently limited compared to the situation in developed countries. The level of transport outsourcing needs to increase over the next five years in order to increase efficiency.
- One interesting development could be the introduction of 'clean vehicles' for elements of the logistics network. This is seen as a key development technology in the Five-Year Plan, and it is likely that the transportation and logistics industry will be a source of demand to help stimulate this new focus area.

### Logistics costs as a percentage of GDP



Sources: EIU; ARC Advisory; China Federation of Logistics and Purchasing

## Sector Leader

### Jeffrey Wong

Partner

jeffrey.wong@kpmg.com



## Aviation

- The switch of focus to domestic consumption, and the desire to improve prosperity of the people, should help drive demand for air travel, both domestically and internationally. Increasing prosperity is also likely to increase demand for higher-end cargo which is more likely to be transported by air.
- The central government continues to support the development of new airports, and has specifically announced the intention to build a second airport in Beijing.
- The government plans to invest more than RMB 1.5 trillion in developing China's aviation industry. Specific measures include
  - increasing the number of airports from 175 to 220
  - adding to the aircraft fleet, bringing the number of airplanes from 2,600 to over 4,500.<sup>(4)</sup>

## CEO checklist

- Have you evaluated your organisation's logistics requirements within China in light of the nation's rising domestic consumption (and less reliance on exports)?
- Given the importance of new energy vehicles in the Five-Year Plan, have you considered ways to incorporate such vehicles into your logistics network?
- As e-commerce (including online shopping) benefits from the Five-Year Plan, have you developed a strategy to capture value from increasing logistics demand?
- Have you considered the impact on your business of the government's planned environmental tax on emissions?

Sources: (1) Datamonitor Industry Profile: Marine Freight in China, November 2010  
(2) Xinhua News Agency  
(3) EIU; ARC Advisory; China Federation of Logistics and Purchasing  
(4) South China Morning Post, Freight forwarders fear global big boys, 9 March 2011

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