accenture
High performance. Delivered.

This article originally appeared in the May 2007 issue of
Outlook
The journal of high-performance business

China

The infrastructure imperative

By Jamie Bolton and Andrew Sleigh

Ambitious plans to raise living standards in China's interior have set off a boom in transport infrastructure development and a rush to upgrade the country's logistics industry. A number of international companies are already taking advantage of the changes.

The Chinese government is justifiably proud of its economic achievements since introducing market reforms in the late 1970s. Between 1978 and 2005, growth has been remarkable, at nearly 10 percent per year, while foreign trade has increased at an annual rate of more than 16 percent. As a result of this economic boom, more than 200 million people have been lifted out of poverty.

At the same time, however, Beijing is also concerned by the unbalanced nature of this growth—in two respects.

First, significant disparities in income and living standards persist between China's coastal and inland regions and, more generally, between its urban and rural areas. Second, China's economic growth relies heavily on investment and exports; in fact, exports account for more than 36 percent of its GDP compared with 22.7 percent for Brazil and 21.1 percent for India. By contrast, domestic consumption as a proportion of GDP remains low by international standards.

Faced with these economic and social imbalances, the government determined that in 2007, its top priorities would be the pursuit of more equitable development and the creation of a "harmonious society." To these ends, the basis of China's growth is to be broadened from quantity to quality and from investment and exports to domestic consumption.

Opening the interior
Successfully reaching these goals will hinge on a number of factors. But of the many

challenges facing the government, addressing the current state of China's underdeveloped transport infrastructure and immature logistics industry is crucial.

Why? Because the country's fragmented distribution systems, limited use of technology in the distribution and logistics sector, dearth of logistics talent, regulatory restrictions and local protectionism all combine to hinder the efficient distribution of domestic and imported products, and thus reduce returns on investment.

As long as most companies find it difficult (and sometimes impossible) to deliver goods to end users outside the major cities, vast swaths of China's market will remain relatively unattractive to both domestic and international corporations, which will blunt government attempts to bring prosperity to the country's interior. But if the government can follow through on extending and opening the arteries of China's transport system, the flow of labor and investment beyond the coastal provinces will improve, further stimulating domestic consumption and contributing to balanced economic growth.

A pivotal role for logistics

The good news is that Beijing has already taken significant steps toward improving China's transport infrastructure. It's difficult to put a dollar value on the progress that has been made so far, but according to its 11th five-year plan (2006–2010), the government is expected to spend $20 billion on building and upgrading the country's railway system alone (see sidebar, page 8).

To be fully effective, however, infrastructure investments need to occur in tandem with greater efficiency and innovation in logistics—that is, in the acquisition, transport, storage and delivery of goods. Despite its reputation as a low-cost country for doing business, selling in China remains expensive. Indeed, for many commodities, logistics costs are 40 percent to 50 percent higher than in the United States, while accounts receivable, a measure of logistics efficiency, often exceeds 90 days.

Still, there are signs of improvement. The logistics industry in China has begun to consolidate, which is gradually stiffening competition and, as a result, lifting service standards.

These changes represent important opportunities for international companies, which have historically been forced to operate in China through joint ventures. Now that restrictions on foreign investment have been loosened by the market-opening commitments made when China entered the World Trade Organization in 2001, these companies are able to buy out their partners and create wholly owned foreign enterprises. Recently, three large companies have begun to separate from their mainland Chinese joint venture partners: UPS bought out Sinotrans's express operations in 23 Chinese cities; Kerry Logistics, a Hong Kong–based company, bought out EAS International Transportation; and FedEx acquired its partner Tianjin Datian W. Group Co.

Meanwhile, for the logistics industry, the competitive dynamics in China are changing dramatically. There are still more than 15,000 registered logistics providers in the country, and no single company commands more than 2 percent of the market or provides nationwide intermodal transport service. Foreign logistics firms are undoubtedly gaining traction, but this, in turn, has sparked the emergence of strong local players with the scale and reach to compete with multinationals.

China's ambitious, transformative infrastructure buildup, along with government initiatives to lure investment inland (see sidebar, page 6), will have huge socioeconomic implications for the country. For those foreign businesses operating in China, understanding these developments can help uncover potential comparative advantages as well as opportunities for more efficient labor utilization, greater penetration of new markets and more streamlined supply chain systems.

To create sustained value from these developments, Accenture recommends a measured approach that takes into account the following factors.

1. The costs and benefits of moving inland

China's focus on transport infrastructure and logistics will have a significant impact on companies hoping to do more business in the hinterland. For manufacturers, more efficient transport links mean factories can take advantage of cheaper land and labor (see chart, page 5) in the country's interior (although this advantage must be weighed against the cost of getting goods back to the coast, should that be required).

A number of companies have already taken the plunge. To cut costs, Unilever recently moved its detergents and personal care products manufacturing center 280 miles west, from

Shanghai to Hefei, in Anhui Province. Changan Ford Mazda Engine Co., a three-way joint venture scheduled to begin making car engines in Nanjing this year, plans to transport components downriver to ChangAn Automotive Group's factory in Chongqing, in the center of China.

International companies are also discovering that there are clusters of complementary businesses emerging inland that they can tap into. Such industry clusters are an increasingly popular way for local governments to promote their economies, because by targeting specific industries, they can better focus on developing distinctive resources and skills. In the automotive industry, for example, there are more than five such industry clusters scattered around the country, competing with one another for domestic and foreign investment.

Hubei Province, currently the fourth-largest car production center in China, is home to two key players: Hong Kong-listed Dongfeng Motor Co. (which has joint ventures with Nissan Motor Co., Honda Motor Co. and PSA Peugeot Citroën) and Aeolux Automotive Company. The province's automotive clustering has fostered hundreds of auto parts manufacturers, both local and foreign, in its capital, Wuhan.

Taking advantage of the favorable infrastructure and the presence of complementary suppliers and buyers, companies like the French auto parts supplier Faurecia and several Japanese suppliers have been expanding their business in Wuhan, building factories and increasing investment. By 2010, Wuhan aims to produce more than 900,000 vehicles a year.

A word of caution: Despite the obvious advantages of moving inland, companies should not assume that they will be able to simply pick up their operations on the coast and transplant them elsewhere. An enormous amount of due diligence is still required. Just because a company has set up operations once in China does not mean that doing so a second time elsewhere in the country will be significantly easier, especially given the significant variations in policies, regulations and efficiency of local governments.

2. New pockets of consumer demand

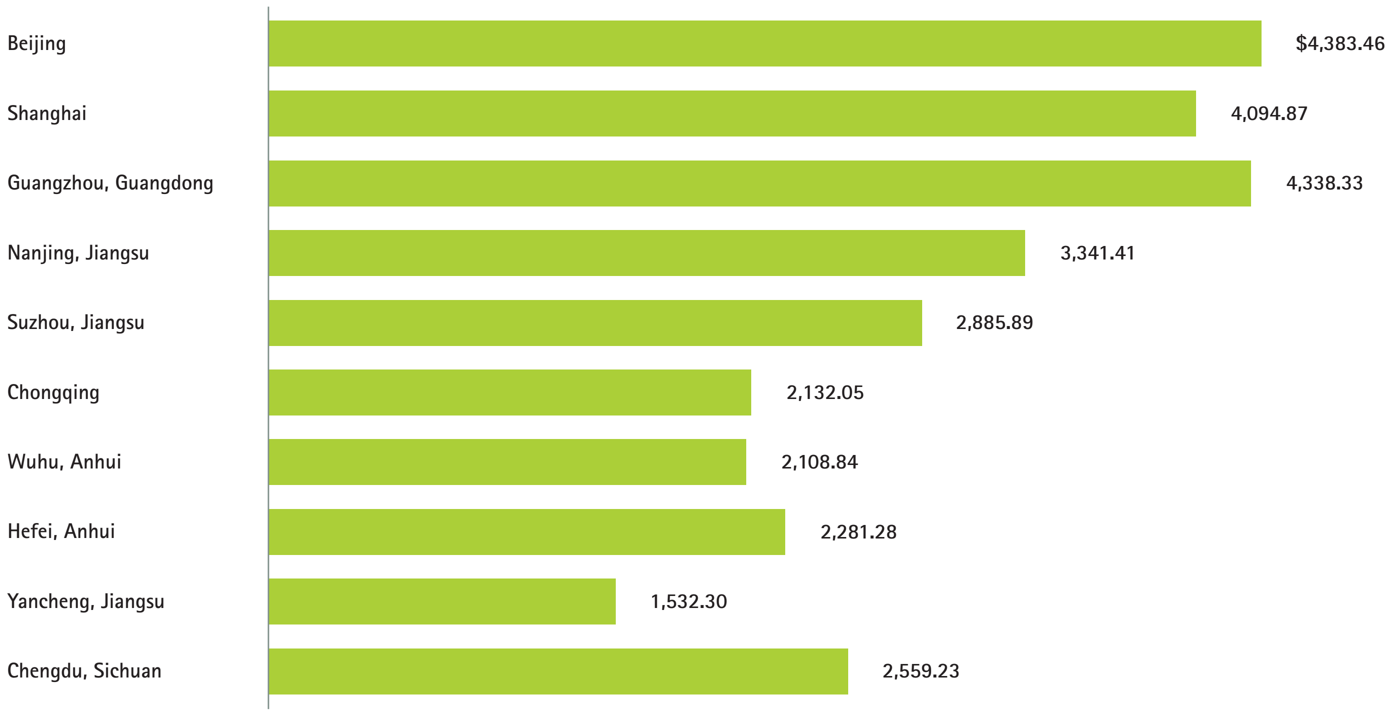
Although average household income levels in China remain well below those in the developed economies in the West, the improvements in infrastructure and logistics will create some exciting opportunities to tap into heretofore inaccessible consumer demand in China's hinterland.

While many of the lesser-known provinces do have low average per capita GDP, pockets of affluence are rapidly emerging in a number of China's second- and third-tier cities—households that aspire to higher living standards, with average monthly incomes not far below those in the country's major cities. These households are purchasing a wide range of products—cars, flat-screen TVs, microwaves—that up until recently would have been beyond their reach.

Exciting opportunities

Improvements in infrastructure and logistics will create opportunities to tap into once inaccessible consumer demand in China's hinterland. Pockets of affluence are already emerging in China's second- and third-tier cities.

Average annual income (US$), 2005



Source: Local cities' Bureaus of Labor and Social Security

Several international companies are already expanding their presence in China to take advantage of these opportunities and to broaden the focus of their business beyond the ultracompetitive Beijing, Shanghai, Guangzhou and Shenzhen.

By the end of 2006, Wal-Mart already had 71 stores in 34 Chinese cities, including relatively smaller municipalities like Chengdu, Wuxi and Nanchang. The German retailer METRO Group has been focusing its expansion projects on small and midsized cities that are near larger ones, as well as on urban areas in central China. Since opening its first store in 1995, the French retailer Carrefour has established 90 hypermarkets in cities across China, including in areas as far west as Urumqi, in Xinjiang Province. Such early movers are aware that selling to new customers in second- and third-tier cities will not be anything like serving customers in coastal urban areas. In a country that has 56 different ethnic groups, more than 1,500 different dialects and subdialects, and huge extremes in climate and geography, an appreciation of diversity is key.

Consumer dynamics are also sometimes surprising, and selling strategies must be tailored accordingly. For example, because consumers in less modernized, less developed regions are more concerned with function and value than with brand name and style, they appear much more likely to try new products. In addition to understanding local consumers' tastes and attitudes, international companies should be aware that they may find it difficult to staff their operations, particularly if they are looking to hire expatriates. Second- and third-tier locations such as Chongqing and Chengdu may be less attractive than modern metropolises like Beijing and Shanghai, especially given the current limited scale of the expatriate communities in those more remote cities.

Opening the hinterland

Western China. In 2000, the Chinese government launched a much-publicized campaign to open up the country's western provinces and attract greater investment and economic development to the region. Infrastructure improvement was a key part of the plan; in fact, the government spent almost $9 billion just building new airports between 2000 and 2005. Other initiatives have targeted human capital development, environmental protection, and the growth and restructuring of local natural resource-based industries, in the hope of improving the region's overall investment attractiveness.

At an enterprise level, Beijing has also introduced a series of tax breaks and incentives—especially in the energy, information, telecommunications, biomedical and space technology industries—to further encourage business investment. Lafarge, the world's top cement company, has been running operations in four western locations, and manufacturers including Intel Corp. have set up factories in Chongqing—one of the two largest cities in the west.

Northeast and central China. Since 2003, revitalizing northeast China—once the industrial heart of the old, centrally planned Chinese economy—has been another regional priority for the government. The restructuring of state-owned enterprises has greatly affected this region, where unemployment rates are as high as 10 percent to 15 percent.

As a result, efforts have been made to diversify the northeast's industrial base through an extension of the private sector. Dalian, in Liaoning Province, for example, is modeling itself as a global service and call center hub with the government actively promoting the city to both multinational and local businesses. Companies including Dell and Oracle have set up operations there, drawn by the city's infrastructure, multilingual talent, IT skills, government support and intellectual property protection.

Most recently, there has been an increased focus on developing central China. This reflects a new regional strategy to utilize the structural, geographical and resource advantages of the central provinces, which are closer to the country's coastal region than to the western provinces. By developing the center of the country as a transport, commercial and distribution hub, the government hopes to forge tighter links between eastern and western China.

Special Economic Zones. Special Economic Zones (SEZs) have played a crucial role in driving China's overall economic development. There are currently five SEZs—Shenzhen, Zhuhai, Shantou, Xiamen and Hainan—that have province-level authority on economic administration and are given exclusive economic policies and flexible measures to attract and manage business investment.

In addition, there are numerous economic development zones—high-tech zones and industry-specific preferential regions—that, through local and regional government support, offer a series of policy and tax incentives, industry-specific or otherwise, in an effort to promote economic development through increased foreign investment. The Nantong Economic & Technological Development Zone is one of the 14 national economic development areas authorized by the State Council in 1984. Located in Jiangsu Province, approximately 80 miles northwest of Shanghai, it has more than 200 foreign-invested enterprises and is aiming to become a center of the chemical, textile and electronics industries.

3. Your logistics operations

As investments in China's transport infrastructure pay off, companies will see a reduction in the number of bottlenecks and obstacles that currently hamper their efforts to deliver their goods to consumers.

Nevertheless, executives should be under no illusions that the holy grail of fully seamless, integrated, technology-enabled fulfillment is going to appear in China overnight. Many of the country's third-party logistics providers still fail to offer the same level of service available elsewhere in the world, slowing the more widespread implementation of the sophisticated supply chain integration systems commonly used in developed markets.

To address this challenge effectively, we recommend three forward-looking actions that companies can take now to help them effectively navigate the logistics arena in China.

- **Use technology as a differentiator.** Tech-savvy companies are already identifying opportunities to adopt knowledge-based systems that streamline their logistics processes, increasing efficiency and lowering costs. These companies are employing a variety of tools to select the best delivery routes and reduce the number of vehicles needed to transport goods. Using these technologies, delivery fleets are being drastically shrunk. During the next decade, multinationals will begin using the same sophisticated tools in China they use elsewhere in the world. As they do, their suppliers—both international and local—will be forced to follow suit.

- **Focus on inventory management.** As better transport and logistics services become available, there will emerge a core of companies with the standards to serve multinationals and big domestic companies. As this happens, customers will stop concentrating exclusively on obtaining the lowest price and begin focusing on what logistics professionals call "total cost of error."

  The reason is simple: Historically, China has produced low-end products, so managing inventory has not been seen as a strategic capability. But as product value increases, companies will begin focusing more on inventory management. Makers of more expensive consumer electronics, electronic components and other high-value merchandise will be in the vanguard of this new, more holistic view of how to achieve cost savings in China.

- **Grow your own talent.** Finally, top-performing companies recognize that as service standards rise and customers focus more on the total cost of error, China will need to increase its supply of skilled logistics professionals. Some observers say that although larger companies have been improving their infrastructure and operating systems in recent years, many do not spend money to attract quality staff.

  In fact, such staff may not yet exist—at least not in the numbers required. By 2010, China will need an estimated 400,000 logistics professionals; local universities still struggle to produce even 10,000 logistics graduates a year. Moreover, untrained local staff often have few incentives to perform well. Some observers say that between 85 percent and 90 percent of all distribution initiatives in China fail because of workforce errors.

China's transport infrastructure priorities

Here's a snapshot of where China's infrastructure investments are going.

Roads. Although its system of roads will play a crucial role in China's economic growth and urbanization, many parts of the country are still extremely poorly connected. To address this problem, the government is planning to expand the country's expressway network to 85,000 kilometers—longer than the US interstate highway system—in an effort to connect all towns and cities with populations greater than 200,000.

Total investment in the highway system over the next 30 years is projected to be $256.4 billion. When the expansion is complete, residents in eastern provinces should be just 30 minutes from the nearest expressway; inland residents, except for those in the remote far west, should be about one hour away.

Railways. China has historically underinvested in its railroads, despite its reliance on the system for the transportation of its natural resources. The country's rail density is among the world's lowest; at the same time, the density of traffic on the rail system is among the world's highest. China began making necessary investments to its rail network in 2004, when several power stations shut down after the rail system failed to deliver coal on schedule.

In its 11th five-year plan, the central government earmarked about $20 billion to expand the country's railway network. The plan makes western areas a priority and aims to nearly double the regional rail network to 40,000 kilometers by 2020. Recent showcase projects include the Qinghai-Tibet railway and a proposed US $4.3 billion high-speed maglev link between Shanghai and Hangzhou.

Ports. The rapid development of port infrastructure has been a key factor in boosting China's exports during the past decade. In 2005, Shanghai overtook Singapore to become the world's largest cargo handler in terms of volume; the city's new deepwater port at Yangshan is expected to make Shanghai the world's top container port within a few years.

Enlarging the handling capacities of ports on China's rivers, traditionally the major links between the interior and the coast, is the government's next aim. This involves investing in new docks, lifting equipment and transport connections, as well as dredging along the country's main inland shipping artery, the Yangtze River.

Between 2001 and 2005, total cargo volume along the river's middle reaches more than doubled. That volume is expected to continue to grow as the low cost of shipping encourages manufacturers to use inland waterways to transport heavy cargo such as liquids and auto parts.

Aviation. Increasing the overall capacity and reach of China's aviation industry has also been a key government focus. The most recent five-year plan allocates $17.5 billion for the construction of airports between 2005 and 2010. This includes 71 airport expansion projects, relocating 11 airports and building 49 new ones. A strong emphasis will be placed on rejuvenating the old industrial bases of northeast China.

High-performance companies recognize that even the world's best supply chain technology is meaningless without the skills base to support it. China does not have nearly enough qualified logistics experts, so smart companies will begin thinking now about how to get and retain the best people with expertise in this area. This means creating competency-based training models that build necessary skills and knowledge for today's requirements as well as the future's. Technology can be leveraged to quickly build these skills through multiple channels in a shorter time frame, reducing disruptions and minimizing costs. By building and sustaining new capabilities, these companies can foster higher levels of business performance.

The massive transformation of transport infrastructure that is taking place in China is unprecedented, in terms of both scale and ambition. The substantial investments being made by the government, combined with its determination to create a more "harmonious society," are creating a new wave of opportunities for business to tap into new sources of labor, grow their consumer markets and reconfigure their supply chains for greater efficiency.

Smart companies that are already making plans to take advantage of these opportunities also realize that the business landscape in China is not going to change overnight. Wealth will remain unevenly distributed for some time yet, and domestic consumption will not fully flourish until China's social safety net, including the provision of health care, education and pensions, is shored up. Nevertheless, the dramatic upgrading of China's transport infrastructure network signals that the next stage of the country's development has begun. Companies that take the time to analyze and understand this new reality will greatly increase their chances of achieving and maintaining a strong competitive positioning in the Chinese market for many years to come.

About the authors

Jamie Bolton is a Shanghai-based partner responsible for the Accenture North Asia Supply Chain service line. With 10 years' experience in supply chain consulting, Mr. Bolton specializes in supply chain strategy and integration, supply chain planning and optimization, procurement transformation, sourcing and procurement, and supply chain process reengineering. Mr. Bolton has worked with many leading global and Asian companies across a variety of industries; his recent work has focused on integrating multinational companies in China through global sourcing and operations strategy development and execution.

jamie.m.bolton@accenture.com

Andrew Sleigh is the China lead for Accenture Policy and Corporate Affairs. Mr. Sleigh's work examines the opportunities and challenges that the country's unique operating environment is creating for multinational and local businesses. Located in Beijing, Mr. Sleigh previously worked in Accenture's Strategy group, with a focus on retail and consumer goods.

andrew.sleigh@accenture.com

Outlook is published by Accenture.