

# CHINA CONSTRUCTION

## IMPORTANCE OF INFRASTRUCTURE CONSTRUCTION IN CHINA

15 JANUARY 2009

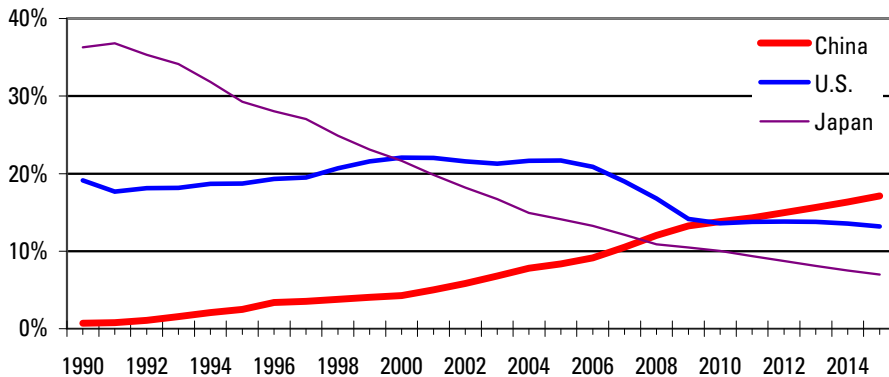
### CHINA BUILDS ITS WAY TO THE TOP

Significant reform and modernization of China's economy have occurred over the past 30 years. Relaxing restrictive foreign trade policies and implementing incentives to attract foreign capital were successful decisions in supporting a period of rapid economic expansion. The inflow of foreign direct investment (FDI) ignited demand for construction spending as new facilities, structures, and transportation networks needed to be built to meet the new investment objectives.

In the early 1990s, total construction spending in China was a mere fraction (less than 1%) of total global construction spending. To keep pace with the industrial and commercial development, as well as the new demands placed on urban infrastructure due to an increase in labor migration, growth in both public- and private-sponsored funding boosted construction spending to approximately 10% of global construction by 2007. In terms of the dollar value of investment, global construction spending was once primarily concentrated in the economic powerhouses of Japan and the United States, but that fact no longer holds true. Given the growth obstacles faced by Japan's economy, in contrast to China's thriving market, IHS Global Insight anticipates China outpaced Japan in terms of nominal construction spending in 2008. Although the current global economic environment has dampened economic opportunities across all markets, we expect that by 2010, China will overtake the United States, thus accounting for 14% of global nominal construction spending. However, the nature of construction spending in China over the next few years will become more diversified in response to weaker economic growth prospects and as the government's strategic development objectives are met.

#### CHINA'S SHARE OF GLOBAL CONSTRUCTION SPENDING

(Percent share of global construction spending)



Source: IHS Global Insight Construction Service





**BETWEEN 1998  
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## WAS CONSTRUCTION GROWTH SNUFFED WITH THE OLYMPIC FLAME?

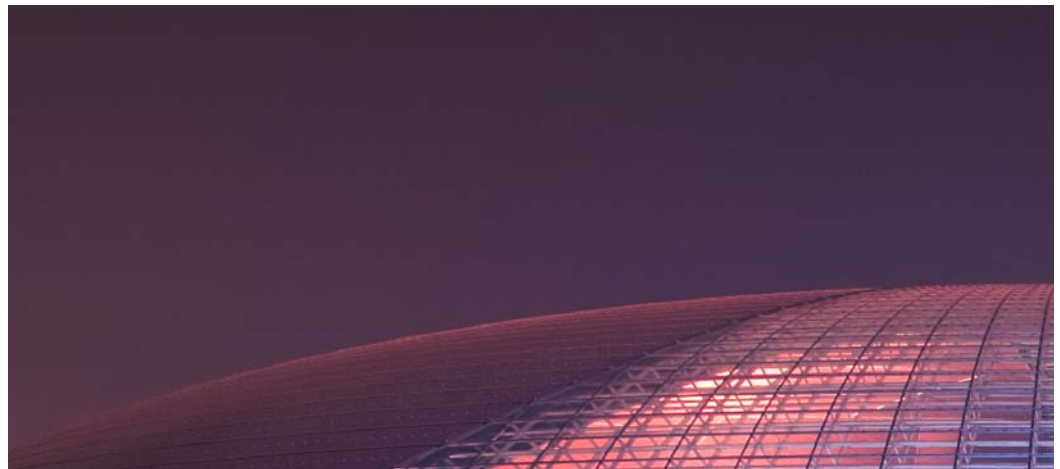
In 2001, Beijing was awarded the 2008 Summer Olympic Games. In preparation for the event, China invested US\$36 billion into commercial construction projects, which included venues for the Olympics and industrial parks, according to IHS Global Insight's Construction Service estimates. If investments made into urban transport (i.e., new subway lines) and other types of infrastructure spending (i.e., a new airport) in the Beijing area are considered, total construction spending for the Games was approximately US\$70 billion. To the benefit of the Beijing economy, investments to further improve the city's infrastructure network will continue in the post-Olympic environment.

The magnitude of construction spending associated with the Olympic Games was significant enough that its effect was not just localized to the Beijing economy. It was an important contributor to total Chinese infrastructure spending from 2001 to 2008. Nonetheless, the explosive growth in China's construction sector since the late 1990s encompassed much more than preparations for the Olympics.

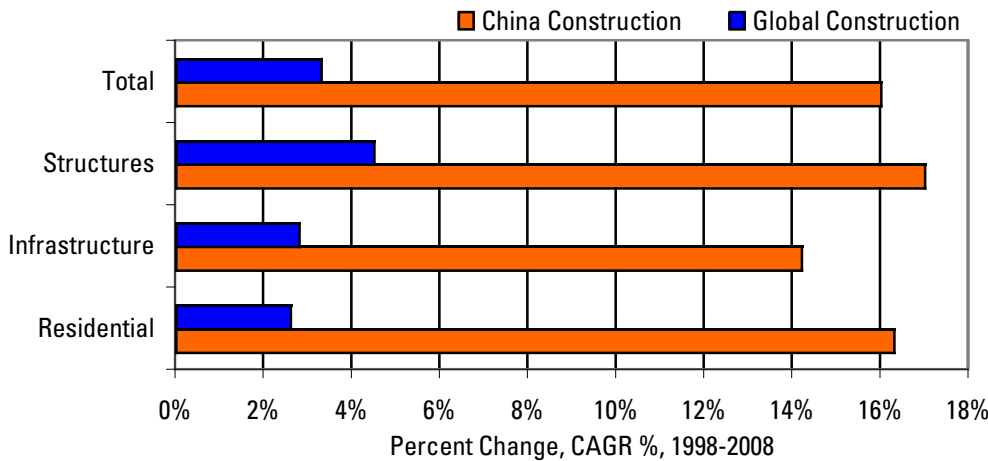
Between 1998 and 2008, investment in China's construction sector grew at a real rate of 16%. A number of factors contributed to this, including:

- The massive inflow of FDI combined with government spending initiatives to expand and diversify China's manufacturing and industrial base;
- Investment geared toward developing the coastal regions;
- Government efforts to improve physical infrastructure, particularly in the coastal and western regions;
- Investments in China's power sector;
- Coping with demands placed on urban infrastructure due to rapid rates of urbanization;
- Demand for residential construction investment.

Nonresidential structure spending accounts for 52% of total construction; infrastructure spending and residential construction contribute 27% and 21%, respectively.



CONSTRUCTION SPENDING BY SECTOR



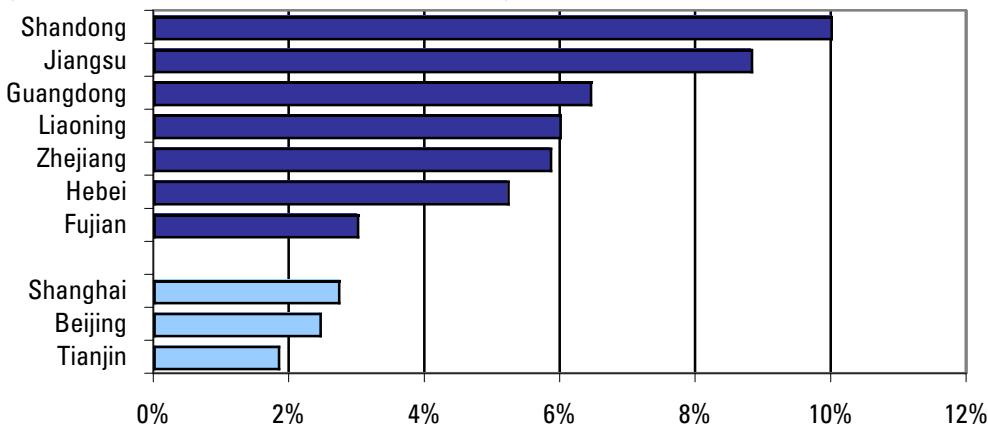
Note: CAGR stands for compound annual growth rate.

Source: IHS Global Insight Construction Service

Total real construction spending is estimated to reach a staggering US\$541 billion in 2008 (US\$743 billion in nominal terms). China's more developed regions in the southeast, Bohai Bay cities, and the central region were direct beneficiaries of this rapid rate of investment growth. By using fixed-asset investment as a proxy measure for construction spending by region, 10 of the more developed regions account for approximately 50% of the national total.

2008 PROVINCIAL/MUNICIPAL SHARE OF NATIONAL FIXED-ASSET INVESTMENT

(2008 Share of National Fixed Asset Investment)



Source: IHS Global Insight China Regional Service

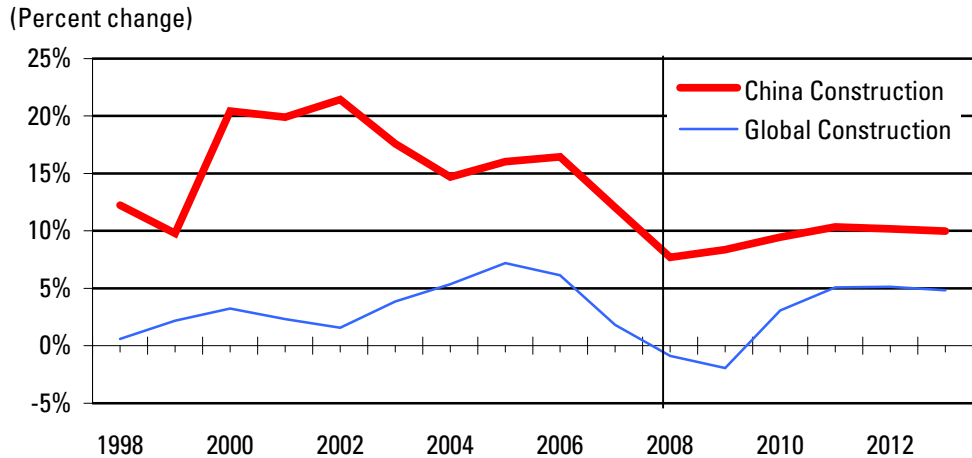
Construction spending in a post-Olympic China will expand at a real rate of 9.2% between 2008 and 2013, on a compound annual basis. After slowing to 8% in 2008 and 2009 (the weakest growth rate of this decade), construction spending will grow about 10% thereafter.



TOTAL REAL CONSTRUCTION SPENDING IS ESTIMATED TO REACH A STAGGERING US\$541 BILLION IN 2008



CONSTRUCTION SPENDING IN CHINA WEAKENS BUT CONTINUES TO GROW



Source: IHS Global Insight Construction Service

This minor near-term slowdown reflects adjustments by the Chinese economy in response to a weak global economic environment—rather than non-Olympic activity, which is a concern for Beijing alone. Nevertheless, expansion in the domestic economy, infrastructure investments, and additional increases in urbanization rates will continue to support growth in the construction sector.

## REBALANCING ECONOMIC GROWTH SUPPORTS INFRASTRUCTURE SPENDING

Over the next few years, an underlying theme of rebalancing economic growth toward domestic-led demand, while taking into account social and environmental concerns, will become more evident in investment decisions aimed at economic development. This includes investment in improving city infrastructure, promoting balanced urbanization and rural development, improving energy efficiency, and reducing environmental degradation. These policies were outlined in the 11th Five-Year Plan that China adopted in 2006, and noted as the country's primary development challenges.

The construction sector, in particular, infrastructure, will benefit directly from government initiatives to expand the country's physical infrastructure by constructing new and refurbishing old highways, railways, and subway systems. An essential component for fostering successful economic development is an adequate infrastructure system. A well-developed transportation network can reduce transportation costs and provide access to otherwise underserved markets. IHS Global Insight estimates an infrastructure construction multiplier in the United States of \$1.6 for every dollar spent. From 2008 to 2013, infrastructure construction spending will grow at a real rate of 9.5% compounded annually.

According to the 11th Five-Year Plan (2006–10), China's central government will spend approximately US\$494 billion on improving the country's infrastructure.

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This includes<sup>1</sup>:

- An investment of US\$194 billion for construction of 19,800 km of railway lines;
- Construction of underground train systems and light-rail systems exceeding 1,500 km in major cities at an investment of US\$26 billion; and
- A total investment worth US\$130 billion in the water and sewage treatment sector.



#### **PepsiCo. Boosts Spending in China – Attracting Investment into China’s Interior**

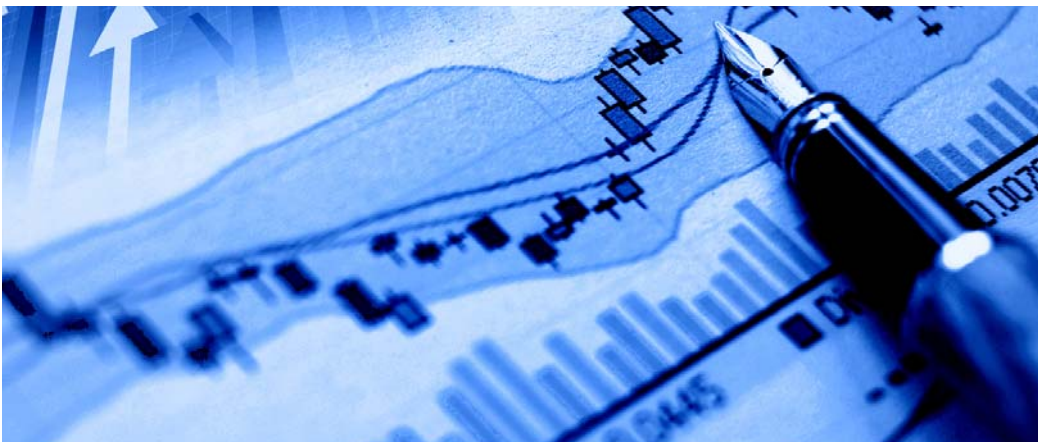
PepsiCo. has announced that an allocation of US\$1 billion will be invested over the next four years in China. The investment plan is aimed at constructing more plants in the western and interior regions, as well as expanding research and development efforts and its distribution network.

*Source: WSJ, November 4, 2008*

## **WEAKER ECONOMIC GROWTH— UNEXPECTED SILVER-LINING FOR CONSTRUCTION INFRASTRUCTURE SPENDING?**

The Chinese economy is not immune to the global economic crisis—its pursuit of a more open trade environment over the past few years has increased its exposure to external shocks. To offset the dampening impact on overall economic growth from the external sector (weak export growth), the Chinese government announced plans to refocus its efforts on boosting domestic demand through initiatives such as increased infrastructure spending. In the late 1990s, the Chinese government introduced similar measures to help offset the negative effect of the Asian financial crisis on the economy, although much smaller in scope.

The stimulus package emphasizes infrastructure development for the next few years, in addition to targeting housing and social welfare programs for additional investment. Based on estimates from the World Bank’s China Quarterly Update (December 2008), the government will contribute nearly one-third of the total investment requirement, with the commercial sector and policy banks accounting for the remaining portion. China’s strong fiscal position provides the government with the necessary fiscal flexibility to implement such measures.



THE CHINESE GOVERNMENT ANNOUNCED PLANS TO REFOCUS ITS EFFORTS ON BOOSTING DOMESTIC DEMAND THROUGH INITIATIVES SUCH AS INCREASED INFRASTRUCTURE SPENDING



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Although the total amount of spending was announced to be approximately US\$587 billion (4 trillion yuan), it is unclear what amount is actually considered new incremental spending. A significant portion of the investment spending was previously allocated for 2009; however, projects that were once sidelined have been reintroduced, spending plans are being moved up, and projects with tentative workplan schedules have been confirmed. The announcement also identifies a boost of investment in fourth-quarter 2008 (approximately 100–120 billion yuan) with the remaining amount distributed over 2009 and 2010.

A few of the key investment initiatives include meeting both short- and long-term goals:

- Low-income housing as a priority—an estimated 10 billion yuan to be invested by end-2008<sup>2</sup>.
- Improvement of rural infrastructure and living standards—an estimated 34 billion yuan to be invested by end-2008.
- Expansion of railway and expressway networks and airport construction—an estimated 34 billion yuan will be invested by end-2008. Railway investment will receive an injection of 30% of the total investment (approx. 444 billion yuan).
- Improvements to the power grid.
- Investments into western China's infrastructure and social development.
- Construction investment related to the environment—an estimated 13 billion yuan will be invested in energy conservation by the end of 2008.
- Innovation investment for the high-tech industrial structure.
- Investments into reconstruction projects in earthquake disaster areas.

The stimulus package further emphasizes the investment themes outlined in the 11th Five-Year Plan, of rebalancing economic growth with social and environmental concerns. In general, given China's recent rapid pace of economic development and the significant rate of migration of labor from rural to urban centers, infrastructure investment has failed to keep up with the necessary requirements and demands placed on the system. If the investment plans earmarked for the next few years are fully implemented, they will only begin to scratch the surface of outstanding issues.

### ***Infrastructure Spending: Railways***

China's railway network stands to gain from both the strategic goals outlined in the current Five-Year Plan and the recent stimulus package, offering more aggressive investment into a variety of railway projects and expanded plans for future railway construction. China's railways play a vital role in its overall transportation network, especially in the movement of coal shipments. From a passenger and cargo perspective, though, the system does not have the adequate capacity to cope with the demands placed on it. In addition, it has become unreliable (i.e., upgrades are needed) and has faced increased competition from trucking firms. In more recent years, investment into China's railway system has not been as large as that directed at the road network.