Constructing the future China & India

Solidiance evaluates the gap in infrastructure development between India and China

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China and India – the two most populous countries, in the world, and the biggest combined potential for construction growth. While both countries produced similar per capita GDP until the early 1990s, the gap between their infrastructural facilities gradually widened as the economic reforms that China adopted in the 1980s began to take shape.

Throughout the past two and a half decades, China has invested much more heavily in modernizing its physical infrastructure, and has taken a substantial lead over India. India's infrastructure has been struggling to keep up with her growth and the accelerated pace of the last five years has rendered the existing infrastructure completely inadequate.

In view of the current global economic downturn, how are these two giants comparing against each other? The first part of this paper discusses the different stages of development and the gaps in infrastructure construction between the two countries, while the second part reviews the drivers of growth and the opportunities that lie ahead in the sector.

> “…the current slowdown will likely further widen the gap between China and India… in terms of infrastructure construction and development.”

Heiko Bugs, Director China – Solidiance

Part One – Closing The Gap

China is the third largest construction market in the world after the USA and Japan. At a value of US$ 165 billion in 2007 the sector contributes 5.6% to GDP. The construction sector in India contributes 6.9% of GDP and is valued at US$ 65 billion. Although these figures pale in comparison to the size of the American construction market (which is valued at over US$ 1.2 trillion annually), India and China are expected to be global growth engines for the construction industry as they are poised to grow at much faster rates than most developed markets (see chart on upper right).

Despite a population density 2.5 times that of China's, the size of the Indian construction market was in fact 2.5 times smaller than China's in 2007. Furthermore, industry participants have tuned down their 2009 sector growth forecasts amidst the current macro-economic slowdown from 10% to 6% for India, and from 9% to 8% for China, implying that the gap between China and India is expected to further widen into the future.

To study this in greater depth, Solidiance has developed a quantitative comparison model to analyze the state of transport infrastructure development in China and India as a gauge for overall infrastructure construction competitiveness (see chart on lower right). Our analysis shows that India is currently lagging 12 years behind China in terms of transportation infrastructure development.

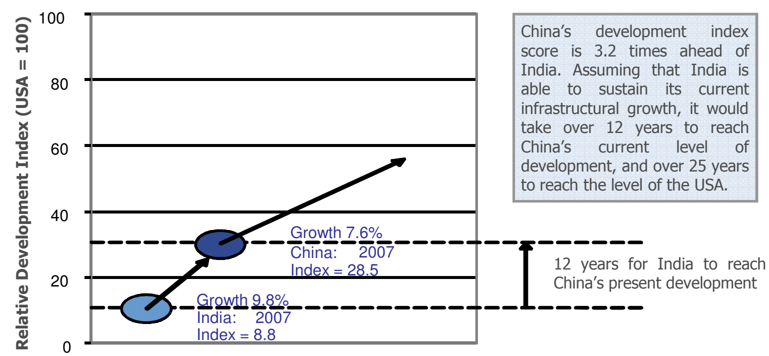
This coincides very closely with the time gap between when the two countries started their economic reforms – 1978 in China and 1991 in India – although India has been recovering lost ground faster in more recent few years.

Size and growth of Construction sector 2007 to 2010

Source: Asia Development Bank, Solidiance Analysis, 2009

The chart above compares the growth of the Construction market in China and India (this compares to growth in the USA of <1%). The gap between the two countries is expected to further widen as we reach 2010.

India is currently 12 years behind China's development in transport infrastructure



Source: Solidiance Analysis, 2009

Methodology: A development index was calculated based on the per capita relative availability of railway, roadways, waterways and airports. Results for India and China were compared against the USA, where the USA has an Index of 100. Growth rates are based on value growth of the transportation infrastructure segment.

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China is currently ahead of India on almost all aspects of transportation infrastructure, and the difference is most noticeable in air transport and domestic waterways.

While both China and India have a similar number of airports (close to 140 civil airports, averaging approximately one airport to 9 million people), the scale between these airports is what divides the two countries. Seven Chinese airports have throughput capacities of over 10 million passengers per year, while India has a mere two. Total passenger air traffic in India was around 60 million passengers between 2004 and 2005, which is only 30% of that of China's. The gap in aviation infrastructure is expected to broaden as China plans to construct 49 new airports and 701 airport expansion projects by 2010, compared to two new airports and 25 upgrades that are earmarked in India.

Domestic waterways have been an important – and cheap – transportation channel in China to move bulk products from coastal areas to the hinterland. There are 124 thousand km of waterways in China, more than 8 times that of the 14.5 thousand km in India. Nevertheless, this development is attributable to the natural geographic and historical differences, as well as the differences in volume and nature of materials and products shipped.

On the other hand, the stage of development in India's rail and road infrastructure seem more on par with China. There are 63 thousand km of railways in India (about 56 km per million population) compared to 75 thousand km in China (57 km per million population). India even has more paved roads at 1.6 million km versus 1.5 million km in China. However this comparison is misleading as one important factor is missing: Quality. Whoever traveled by car in both countries recognizes that pot-holed Indian streets are in no way comparable to China's modern highway network. Nevertheless, India is catching up through new initiatives to improve their road network, such as the new highway between Bangalore and Chennai, and the modern roads between Mumbai and the fast growing industrial center Pune.

While we expect to see the gap slowly closing between India and China in transportation infrastructure, the overall gap still seems to be widening in the broader market of general construction. Further boosted by China's recent construction of high profile projects in city centers (such as the Olympic construction around Beijing and for the 2010 World Expo in Shanghai), the difference in the market value of construction projects and availability of world-class buildings in these two countries is becoming increasingly apparent. What to expect next? and what opportunities lie within? will be further discussed in Part 2 of this paper.

Part Two – Opportunities For Growth

Up until the early 1990s, per capita GDP in China and India was at roughly comparable levels. This lasted until China became the first of the two to reap the rewards from wide-ranging economic reforms, starting more than a decade before India. The fact that China started earlier than India to liberalize its economy and invest heavily in modernizing its physical infrastructure has given it a substantial edge over India in terms of growth and per capita income.

"...despite serious pitfalls, the Mumbai Makeup project is an ambitious USD 60 bn refurbishing plan to support the transformation of the city into a global hub.

This creates attractive niche construction materials opportunities, even during these times of global economic hardship. Slower growth does not mean no growth. The question is how to leverage this growth?"

Bhaskar Raj, Senior Strategy Consultant - Solidiance

In the first part of this paper, we discussed the different stages of development between China and India, identifying a gap of 12 years between the two. Here in Part Two, we will further discuss the direction that the two countries will head towards, understand the drivers of growth and identify the opportunities that may result.

The analysis focuses specifically on the construction of transportation infrastructure as this builds the basis for commercial operations and sustainable growth.

The stages of urban transportation development in the major cities of China and India are summarized in the analysis on the right.

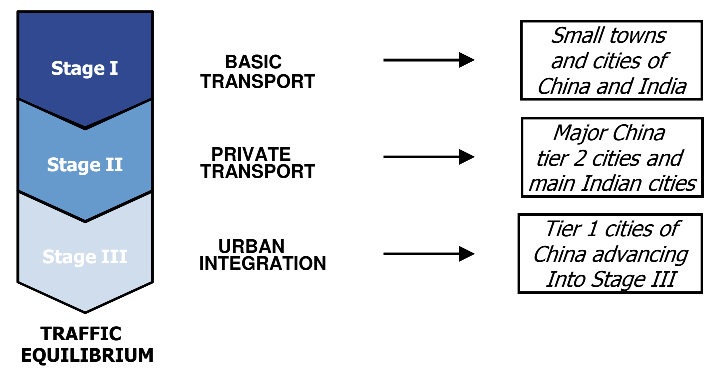
Development has not been homogenous across China and India, and there is a huge gap between the main and smaller cities.

Major urban areas of China are currently advancing into Stage III of transportation infrastructure development, and we observe traffic in its largest cities worsening and at times, threatening to come to a standstill. Tier 2 cities remain at Stage II, and smaller towns are much further back in the queue for development.

India is generally further behind, as even it's largest cities are just about to transition from Stage II to III. Like in Chinese tier 2 cities, large volume investment is expected to continue for the improvement of road networks and accessibility to major Indian cities. Further projects are also in line to improve the public transport system in the largest city centers, predominantly in underground metro and high-speed train systems.

There are currently nine metro systems operating across China (Beijing, Shanghai, Guangzhou, Tianjin, Shenzhen, Changchun, Chongqing, Nanjing and Wuhan), and construction is underway in another seven. India although lagging behind with only four cities having metro systems (Delhi, Mumbai, Kolkata and Chennai), has started to put serious attention into strengthening these networks to improve the urban transportation situation.

Typical stages in urban transportation infrastructure development



Stage	Situation	Investment
I	Dominated by public transport, railway, bus, bikes, some scooters. Few cars.	Little investment into infrastructure.
II	Large growth in the scooter / motorcycle sector, followed by more and more cars. Scooter/ motorcycles and cars are a status symbol.	Large investments to improve roads, bridges, highways, toll roads. Neglecting of public transport which becomes more and more outdated.
III	Rethinking and strengthening of public transport to escape the daily traffic collapse. Often supported by higher costs to purchase cards, limitations on parking space.	Parallel investments into further improving road conditions and improving the public transport system, often subways.

Source: Solidiance Analysis, 2009

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Interestingly, the financing approach for infrastructure projects is different between the two countries. While China has experimented with private sector investments, including foreign direct investments (FDI) into toll-roads, bridges and more recently opening up the railway and commercial waterway sectors, a large majority of projects are still government funded and backed – which will continue to be a key driver behind China sustaining her growth in 2009.

While the government in India also plays a key role in construction growth, the majority of the funding will originate from private and foreign investment. Numerous boards and incentive schemes have been setup to attract FDI to not only build the needed roads and airports, but also to manage the process.

Characteristics of the China market:

- Strong demand for transporting goods to support its manufacturing sector
- Powerful government initiatives
- Urbanization and demand for efficient inter- and intra-city transport
- Opening new sectors to foreign investment

Characteristics of the India market:

- Strong service sector; industrialization gradually picking up speed
- Reliance on public private partnerships
- Urbanization and redevelopment of slums areas
- Inter-state bureaucracy and conservative political mindset favoring incremental changes

Summary of opportunities for foreign businesses in China and India

	MARKET SIZE	GROWTH POTENTIAL	DOMESTIC COMPETITION	GOVERNMENT SUPPORT
Materials	🇨🇳	🇮🇳 🇨🇳		🇨🇳
Equipment	🇨🇳	🇮🇳 🇨🇳		🇮🇳 🇨🇳
Services	🇨🇳	🇮🇳 🇨🇳	🇮🇳 🇨🇳	🇮🇳 🇨🇳
Investment projects	🇮🇳 🇨🇳	🇮🇳 🇨🇳	🇮🇳	🇮🇳 🇨🇳

As both China and India sustain their strong growth, opportunities are in abundance. The impact of size, growth, competition and government support on the various opportunities in the construction sector are summarized in the table above.

It is not an issue of considering whether or not to do business in Chindia, but a matter of how to identify interesting projects and how to customize growth strategies. Understanding the inherent differences in these two markets raises further questions as there are no generic answers or solutions that work equally for China and India. Clearly, strategies that worked in China 12 years ago may not work for India today.

Some questions to consider:

- How to customize the product portfolio for China and India?
- When is the best time to invest?
- Which market segments promise sustainable growth?
- Which market positions are defendable against local and international competitors?
- How to integrate India and China into supply chain strategy and what are the risks?

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Solidiance is a marketing strategy consulting firm with focus on growth in Asia Pacific. We are devoted to working side-by-side with our clients to outpace the competition, close gaps in growth and deliver breakthroughs in performance and profitability. Our Asia focus provides our clients with a better understanding of intrinsic regional issues.

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Heiko Bugs - Director

Heiko is responsible for Solidiance's China operation and has spent his last seven years in Greater China, participating in the country's rapid development as an economic powerhouse. Heiko started his career in Asia working for a manufacturing joint-venture in South Korea before moving back to Germany. He then spent time in a German consulting firm focusing on organizational restructuring. Prior to joining Solidiance, he led the China operation of an international management consulting company with four offices in China where he advised international companies on market entry and growth strategies. Heiko grew the business from nil to over USD 2m and built a team of 25 in China. Heiko has presented China topics at more than 25 international conferences and has been focusing for the last three years on the rapidly developing economic relationship between India and China and its global strategic impact. Heiko studied Economics and Information Technology in Germany (Master) and holds an MBA (Honors) from Rutgers, The State University of New Jersey.

Shutin Wah - Principal

Shutin Wah is a Principal based in the Shanghai office with more than seven years of consulting experience. He has led over 50 national and multi-regional engagements for Fortune 500 clients across China, Hong Kong, and south-east Asia. Prior to joining Solidiance, Shutin managed the Shanghai operations of a global management consultancy, establishing and managing client relationships. With strong experience in combining numerical and qualitative analytics, Shutin specializes in customizing advanced market segmentation and size forecasting models to help clients identify and prioritize market opportunities to develop growth strategies. Shutin has rich experience across numerous growth sectors throughout China and Asia Pacific, including home improvement, petrochemicals and banking. He combines sector and cross-industry best practice, leveraging this knowledge to help clients develop successful market strategies. He holds a Bachelor in Engineering (with Honors) from the Hong Kong University of Science and Technology and an MBA from the National University of Singapore.

China

Suite 801
Hong Kong Plaza
283 Huaihai Road Central
Shanghai 200021
Tel: +86 21 5168 8905
asia@solidiance.com

Singapore

Suite 17-01
High Street Center
1 North Bridge Road
Singapore 179094
Tel: +65 6408 8208
asia@solidiance.com

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