# How to think about infrastructure in India and China

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## Overview

China has invested heavily in infrastructure in the last decade but India has lagged far behind - in large part because of, first, the lack of an enabling policy framework and, second, political opposition. That is changing, however, as regulatory reform takes hold, transforming India's relative backwardness into an investment opportunity as it embarks on a US$495 billion infrastructure-building campaign.

Although China still has significant infrastructure needs, much of this work has been and will continue to be done by state-owned companies. In contrast, the Indian infrastructure sector is dominated by private firms, creating a wider range of opportunities for strategic and portfolio investors - from project development and construction to equipment supply. Relative to India, China requires significantly less foreign assistance for building ports, highways or power plants. India's relatively opaque policy environment and the sheer scale of work to be done mean the potential rewards - and risks - are higher as well.

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**Core Case**
Politics and policies are shifting in favour of private participation in infrastructure

**Assumptions and Evidence**
Recent TS publications on infrastructure in the BRICs

# Core Case

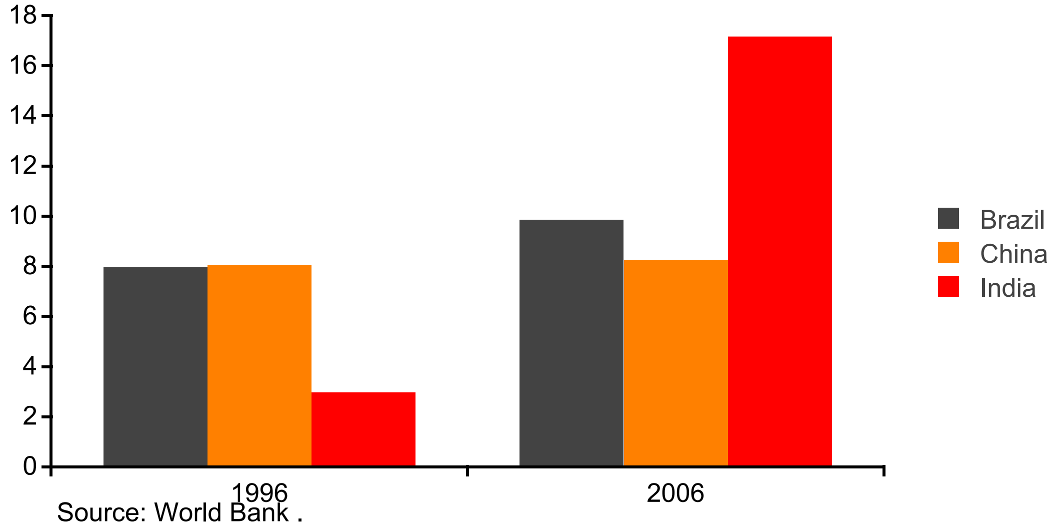
In this report we focus on India and China, the two BRIC countries that offer the greatest potential for infrastructure investors. Trusted Sources is preparing a series of in-depth analytical studies on the infrastructure challenges facing India and China and this report is based on those studies' preliminary conclusions. Here we will focus mostly on India, as we believe that its very backwardness relative to China provides more opportunities for investors.

**Politics are shifting in favour of private investment**

Across the BRIC countries politicians and governments at all levels are well aware that infrastructure - electricity, roads, ports, airports and rail systems - is the key to maintaining and supporting continued economic growth and poverty alleviation. In the past, however, many governments were reluctant to engage the private sector in infrastructure development despite the scale of financing and expertise required. Even if they acknowledged the importance of private sector involvement it was only in a half-hearted manner, and governments did not provide the regulatory environment conducive to private investment - with predictable results. Enron's Dabhol power project in India, which failed after the cash-strapped Maharashtra state electricity board refused to purchase the relatively expensive electricity produced by the plant, is just one example of the notorious history of foreign-financed infrastructure in the BRICs.

Attitudes towards private participation in infrastructure are now changing in the BRICs. Regulatory reforms and the establishment of models for structuring projects in India's port and road sectors, as well as in large power projects, have attracted significant private sector interest. Brazil's road, airport and rail sectors are also benefiting from increased private investment. Russia's ports have improved their efficiency recently, since being encouraged to seek private investment. As a result of these changes, BRICs infrastructure is now a more attractive investment theme for both strategic and portfolio investors looking to benefit from the renewed government commitment to the sector.

**Private participation in infrastructure (US$ billion)**




Source: World Bank .

Looking in particular at developments in India and China, several common themes and conclusions emerge:

1. India lags far behind other countries, particularly China, in developing its infrastructure and it

is playing catch-up.

2. The best-performing sectors are those in which politicians and bureaucracy play a limited, clearly defined role.
3. Flexibility and the ability to adapt to fluid and opaque politics are critical.
4. Local companies have an advantage and are increasingly taking the lead. Foreign investors must take care to pick the right local partner.
5. For those investors seeking to minimise project and political risk, secondary and tertiary investment opportunities - including equipment suppliers and providers of ancillary services - will provide alternative options.

**Why India's need to catch up offers the best opportunities**

Even the casual visitor to India and China will be struck by the vast difference in the levels of infrastructure development between the two countries. China's state-owned enterprises have invested heavily in infrastructure for the last decade, while India has struggled to attract private investment in the sector. By any measure of infrastructure buildout - roads, power plants, ports or airports - India lags far behind.

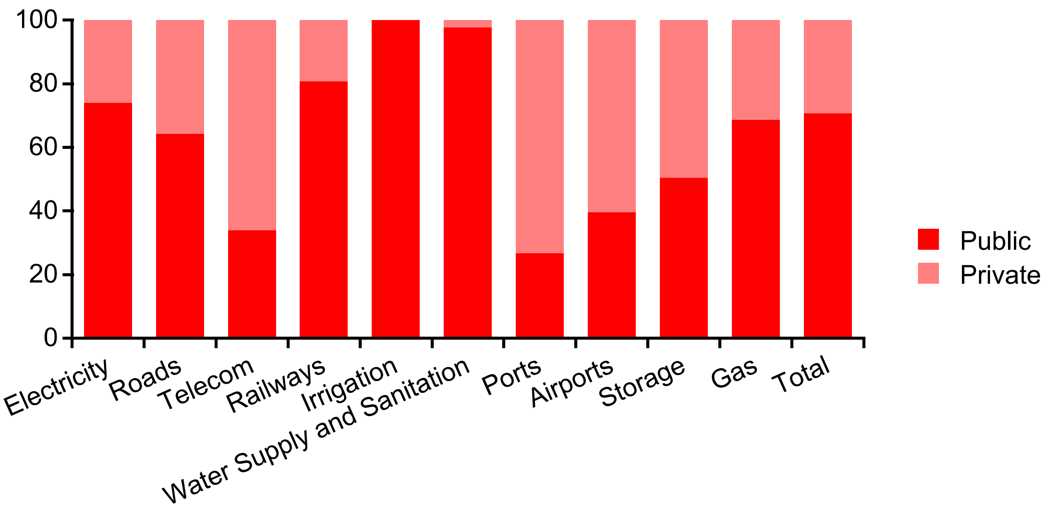
India is only now planning to boost infrastructure spending, from less than 5 per cent of GDP in 2004-05 to 9 per cent by 2012. The government has now set a US$495 billion infrastructure development target for the 2007-12 period.

With backwardness, however, come private sector opportunities as the potential returns to new investment are higher. Of course India's backwardness is a result of mismanagement and the absence of an enabling political and regulatory environment, sothe potential returns depend on the extent and speed at which political attitudes change. Increasingly, policymakers at all levels acknowledge that they need private capital and the involvement of private firms in developing the country's infrastructure if they are to have any hope of catching up.

Among the BRICs, India is the leader in terms of private sector involvement in infrastructure. In 2006 Indian projects with private participation were double those of Brazil or China, according to Indian Finance Ministry calculations. Private sector involvement in infrastructure is expected to grow significantly. In the current plan period (2007-12) 30 per cent of the total infrastructure investment (US$150 billion) is expected to come from private firms, up from 18 per cent in the previous plan period.

In absolute terms, however, it is clear that India has a long way to go. In the 15 years to 2004 private investment totalled just US$42 billion. As of August 2007 only some US$30 billion of private investment had been committed for the current plan period. Since infrastructure projects have long gestation periods, most of the projects involving private investment for the 2007-12 plan need to be tied up early. The government's slow pace in bidding out new projects implies that its ambitious targets will not be achieved within the stipulated time frame.

**Expected public-private sector investment contribution, India, 2007-12 (in percent)**




Source: Planning Commission .

In China the opportunities for the private sector are both different and more limited. State-owned firms, some of them listed, dominate infrastructure. China has the ability and expertise to build world-class roads, airports and ports - and to finance them itself. There is, therefore, less scope for foreign private companies to invest in greenfield projects and in the early development and construction stages of new infrastructure. What Chinese firms lack are the add-ons - skilled technicians and engineers with the logistics and other more technical and managerial skills needed to enhance efficiency.

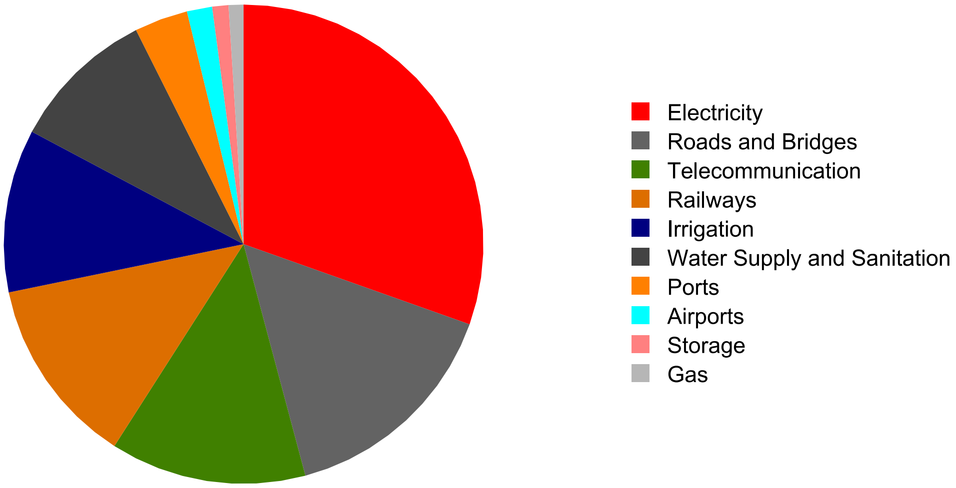
## Choosing the right sector

Across the BRICs, there is ample evidence that those sectors that perform the best are those in which government plays a minimal and well-defined role. While these sectors vary from country to country, one common theme is that many of the success stories occur in areas where model frameworks exist for the private sector to work with governments. Such a model framework must spell out how the risks and returns of a project investment will be shared between the private and state parties. Obviously private investors will gravitate to those sectors where the applicable investment model - most likely a variant of the public-private partnership (PPP) model - results in acceptable returns.

Depending on the investment climate, some infrastructure sectors are more attractive investment targets than others, and these vary from country to country. In Brazil the creation of model PPPs by the state governments of Sao Paulo and Minas Gerais have been so successful that the governments are getting unsolicited bids from the private sector. Brazil subscribers can click here for our analysis of Brazil's PPPs. And in Russia the government's decision to stimulate private sector involvement in ports has resulted in large efficiency gains despite the fact that ports remain a regulated business. Subscribers to our Russia research can click here for our study on Russia's ports.

India's ports are an example both of the importance of having the right regulatory structures in place and of the perverse advantage of backwardness. Even though they are expected to account for only 3.6 per cent of total infrastructure investment, India's ports are a magnet for private investors. Of total investment in ports and airports, 70-75 per cent is expected to come from the private sector.

**India's expected infrastructure investment, 2007-12 (in percent)**




Source: Planning Commission.

One reason for the Indian port sector's attractiveness is that port PPPs (along with those in the road sector) benefit from relatively well-developed Model Concession Agreements. Ships are free to dock wherever facilities are most attractive, so states are vying with each other to lure new investors. The result is that state governments have been relatively flexible in reaching PPP agreements with potential investors.

In contrast, there may be less up-side for the foreign investor in Chinese ports. This is not because of government interference, but because the ports are already among the most efficient in the world. Here India's relative backwardness is its strength vis-Ã -vis China.

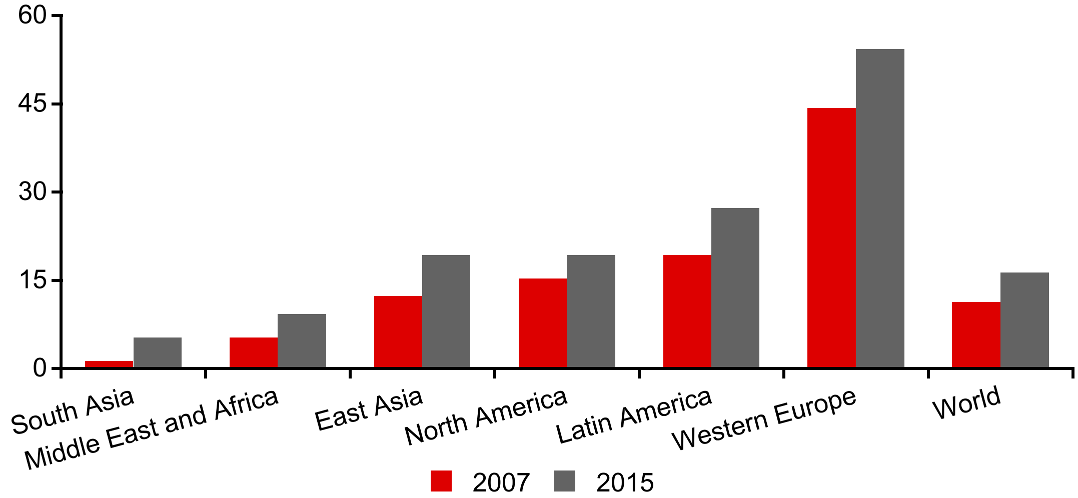
Of course, as mentioned above, lack of development is not in itself a sufficient condition for infrastructure investment success in the absence of the right regulatory or political incentives. Entrenched government interests in India's monopoly railway company, for example, have made it less flexible in PPP negotiations with potential private investors. As in India, foreign investment in China's railways has been hampered by government regulations that prioritise social concerns (including providing rail access to small towns) over economic ones.

Investment in the power sector has been problematic in both India and China. Even though China's electric power industry is second only to the US and has, in each of the past two years, added more than the equivalent of all the new generating capacity built in the UK since the end of the 19th century, residual administrative controls continue to be a problem. A 2004 government ban on the construction of new power plants is being blamed for creating the current supply shortage. In India, where power cuts are a fact of life, progress in developing power projects has been complicated by some states' attempts to retain control of electricity pricing and distribution as a means to garner political support.

Private investment in the politically sensitive water sector has lagged in both countries. Opposition to user fees and government desire to maintain control of the infrastructure sector, arguably the most important public good, have obstructed privatisation.

**Share of population served by private water services (in percent)**




Source: Pinsent Masons Water Yearbook.

## The local company advantage

Erstwhile foreign investors in infrastructure have tried and failed to navigate the labyrinth of emerging markets' political bureaucracies - whether they were power developers in India, Hong Kong toll road builders in China, or European water utilities in Latin America and Asia. Western firms' assumptions about what is feasible politically have been apt to prove mistaken. And reliance on legal safeguards written into contracts will not count for much in a country like India, which was ranked by the World Bank next to last out of 178 countries in contract enforcement. As foreign firms have reassessed their infrastructure operations, increasingly sophisticated local and regional companies have quickly moved in to fill the gap.

Local companies are emerging as the new big players in BRICs infrastructure: India's power sector is dominated by local giants like Reliance, Tata Power, GMR and GVK; Brazilian water utility Sabesp is Latin America's largest water and sanitation company; and Chinese water companies dominate that sector locally. Click here for our analysis of the growing role of local and regional companies in the global water sector.

Local Indian companies have a better understanding of the issues on the ground and are better able to negotiate complex tasks such as land acquisition. Choosing the right Indian partner to deal with the relevant federal, state or local bureaucracy is of critical importance to foreign firms which hope to invest successfully in Indian infrastructure projects.

## The less risky path: secondary and tertiary investment opportunities

A critical mass of private investment in major infrastructure works will likely spur additional private activity in downstream and related projects. A new BOT road project, for example, can be expected to lead to related property investments as well as logistics and retail developments. Some of these may be too localised to figure as investment opportunities but others will have broader implications, such as the growth in demand for logistics services. A "follow the money" approach should help investors uncover such opportunities.

In addition, the capacity of larger Indian engineering and construction companies like Larsen

& Toubro and BHEL are limited relative to demand, creating opportunities for mid-size companies to supply them with everything from specialised equipment to raw materials to skilled labour. For example, faced with shortages of critical components, developers of India's nine ultra mega power plants are expected to turn to foreign firms to supply castings, forgings, turbines and other equipment.

**Politics is the key**

Politics will play a major role in determining the extent to which India meets its infrastructure targets. The shift to private sector-led investment in infrastructure requires that the steps towards political change and policy reform continue and deepen.

While infrastructure is an attractive investment and provides stable cashflows - provided a workable framework for private participation exists - the major risk to investors is that political bottlenecks adversely affect project returns. The way to minimise this political risk is to invest in companies that benefit from infrastructure spending but are not directly involved in the projects themselves. These firms should experience rapid growth while remaining less exposed to political risk than companies with direct investments in infrastructure projects.

# Assumptions and Evidence

Links to previous Trusted Sources research covering infrastructure-related themes.

**India**

**The trouble with public-private partnerships**, *30 Jan 2008*

Private investment is ready but projects to absorb it are not

**Growth derailed**, *18 Jan 2008*

Connectivity bottlenecks limit payoff from development of port infrastructure

**Wind in India's sails**, *17 Jan 2008*

Government policies help India emerge as global power in wind energy

**India's urban water supply outlook** , *20 Dec 2007*

Water sector reform starts trickling down

**Setting sail**, *07 Dec 2007*

Gaining a foothold in global shipbuilding

**Chain reaction**, *03 Dec 2007*

Private sector involvement in the nuclear industry is growing

**Scouting for black diamonds**, *22 Nov 2007*

India raises coal output and imports to meet the demands of a power-hungry economy

**Reaching for the sky**, *01 Nov 2007*

Building height restrictions are beginning to ease in a booming real estate market

**Fruitful endeavour**, *27 Sep 2007*

Further expansion in Indian horticulture depends heavily on infrastructure

**Powering up**, *25 May 2007*

Better government policies are enhancing investment opportunities in India's troubled power sector

**China**

**Central China's promise**, *27 Feb 2008*

Ready for the shift inland

**Clearing the roadblocks**, *05 Feb 2008*

China's highway programme offers big logistics opportunities

**China's railways back on track**, *22 Jan 2008*

But problems lie ahead unless major reforms are carried out

**China's rising river line**, *18 Jan 2008*

Opportunities along the Yangtze

**China's water outlook becoming less murky**, *19 Dec 2007*

Change in the works spells opportunities for foreign water utilities and industrials

**China starts to get serious about nuclear**, *10 Dec 2007*

But full expansion will take a long time

**China makes a splash**, *08 Nov 2007*

But needs to move beyond its short-term shipbuilding advantage

**China's power games**, *11 Sep 2007*

Present price control policies in the electricity sector point towards an energy crisis

**Coals to China**, *03 May 2007*

A bright future for the black stuff

**Going west?**, *26 Apr 2007*

The China miracle that isn't

**As manufacturing goes inland, watch the waterways**, *31 Jan 2007*

Export flows

**Brazil**

**Unclogging Brazil's water and sanitation system**, *27 Feb 2008*

New legislation has the potential to open the floodgates for private investment

**Brazil's rail renaissance continues**, *04 Dec 2007*

Torrid growth in commodities demand unleashes large-scale investments in the railroads

**Road concession auction: a move in the right direction**, *05 Oct 2007*

The 9 October auction should attract interest from local and international players

**Agricultural machinery comes into its own**, *24 Aug 2007*

Government financing is key for the sustainable growth of the sector

**States lead in public private partnerships**, *22 Jun 2007*

A workable model emerges for PPP financing of projects from infrastructure to services

**Private sector leads port modernisation,***14 May 2007*

But politics slow further investment

**Brazil's real estate industry**, *12 Apr 2007*

Will demand for new properties keep up with the boom in construction?

**Power rationing for Brazil?**, *27 Mar 2007*

Will poor planning and lack of investment hit growth?

**Brazil's rocky roadmap**, *20 Mar 2007*

Roads, the Achilles heel of exports

**Russia**

**Communal services open for business**, *07 Apr 2008*

A vast and complex sector offers opportunities to oligarchs and niche players alike

**Ports catching up**, *18 Jan 2008*

An infrastructure challenge Russia is likely to meet

**Russia's Far East comes in from the cold**, *29 Nov 2007*

A play on China and federal funding

**Russia's nuclear industry**, *19 Oct 2007*

A revealed comparative advantage

**Construction materials: a core story**, *27 Jul 2007*

The sector highlights the growing pains - and the pleasures - of Russia's capital deepening

**Real estate spurs Russia's economic growth**, *29 Jun 2007*

Despite the construction frenzy, no supply gluts in sight

**Russian railways follow the Gazprom model**, *10 May 2007*

From Soviet behemoth to freight 'national champion' in expanding intercontinental transport corridors

**Russia's oil pipeline strategy**, *02 Apr 2007*

Pipeline bottlenecks give way to overcapacity

**GMI**

**The new players in global water**, *16 Jan 2008*

Local companies are succeeding where the multinationals failed

**Nuclear dreams**, *13 Nov 2007*

Obstacles in the path of the nuclear renaissance

**Coals from Newcastle**, *17 Oct 2007*

Alleviating bottlenecks at coal export terminals

## Contact us

If you would like to discuss any of the points made in this note, or ask further questions, please feel free to contact the authors:

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