



E&C OUTLOOK: INDIA

ECRI Sponsors' Meeting
London, 10 June 2009

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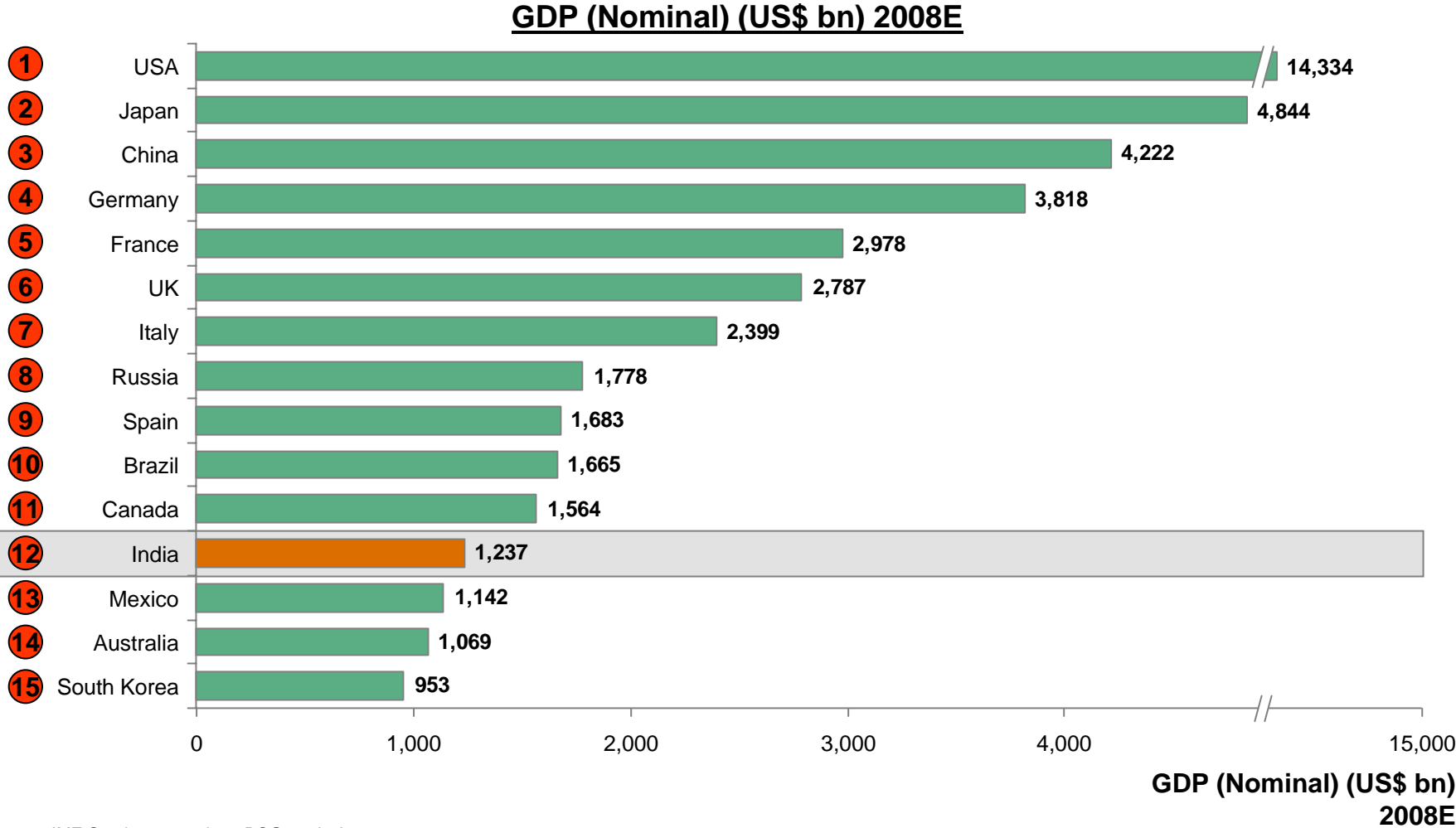
Agenda

India economy overview

Engineering & Construction landscape

Government interventions

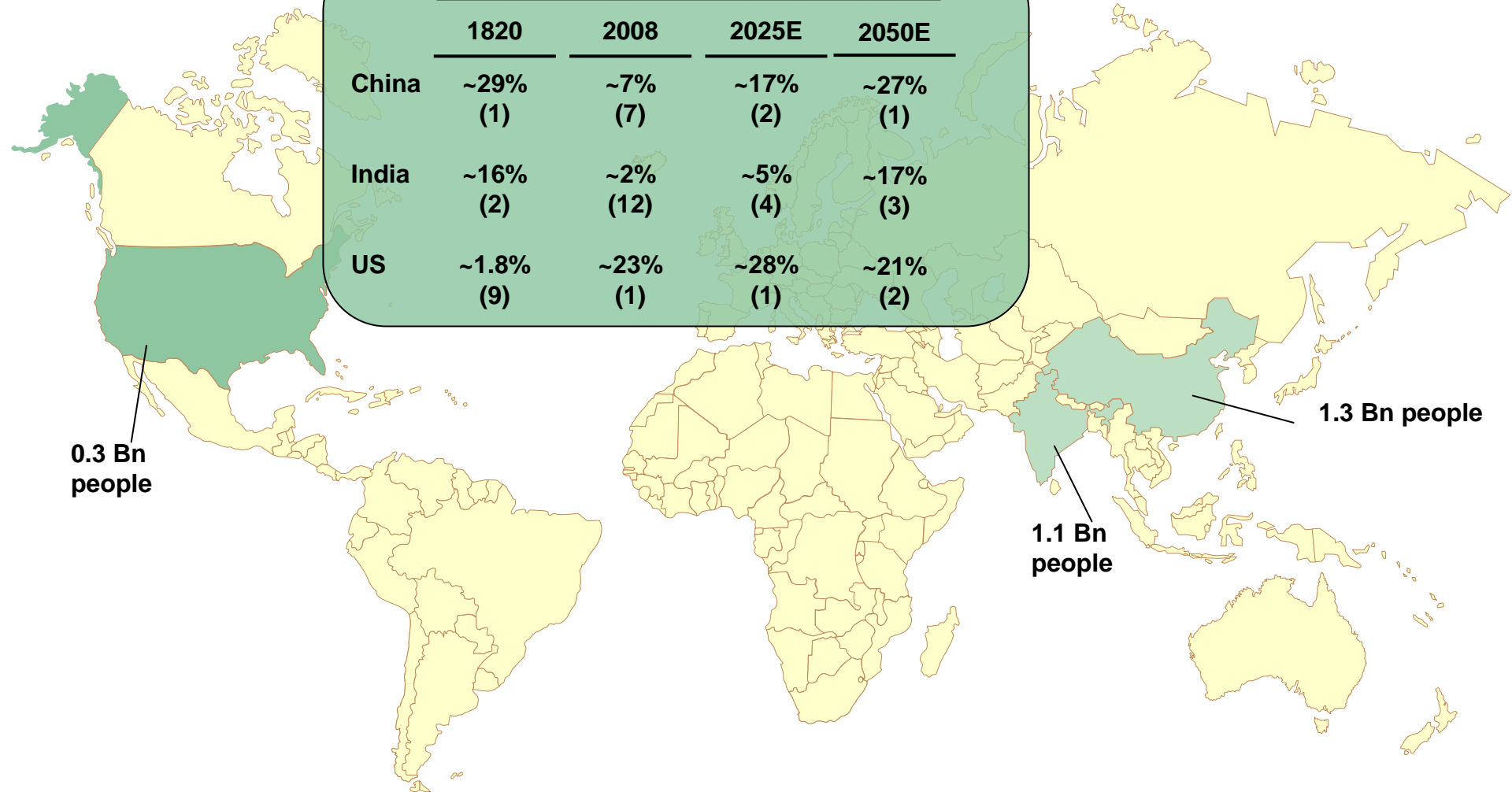
India is currently the 12th largest economy in the world...



Source: IMF October 2008 data, BCG analysis

... and is expected to be the 4th largest economy by 2025

	Share of World GDP ¹			
	1820	2008	2025E	2050E
China	~29% (1)	~7% (7)	~17% (2)	~27% (1)
India	~16% (2)	~2% (12)	~5% (4)	~17% (3)
US	~1.8% (9)	~23% (1)	~28% (1)	~21% (2)



1. Nominal terms
 Note: Figures in bracket indicate GDP world ranking
 Source: Angus Maddison's OECD Book "The World Economy – A Millennial Perspective", IMF October 2008 data, Goldman Sachs projections, BCG analysis

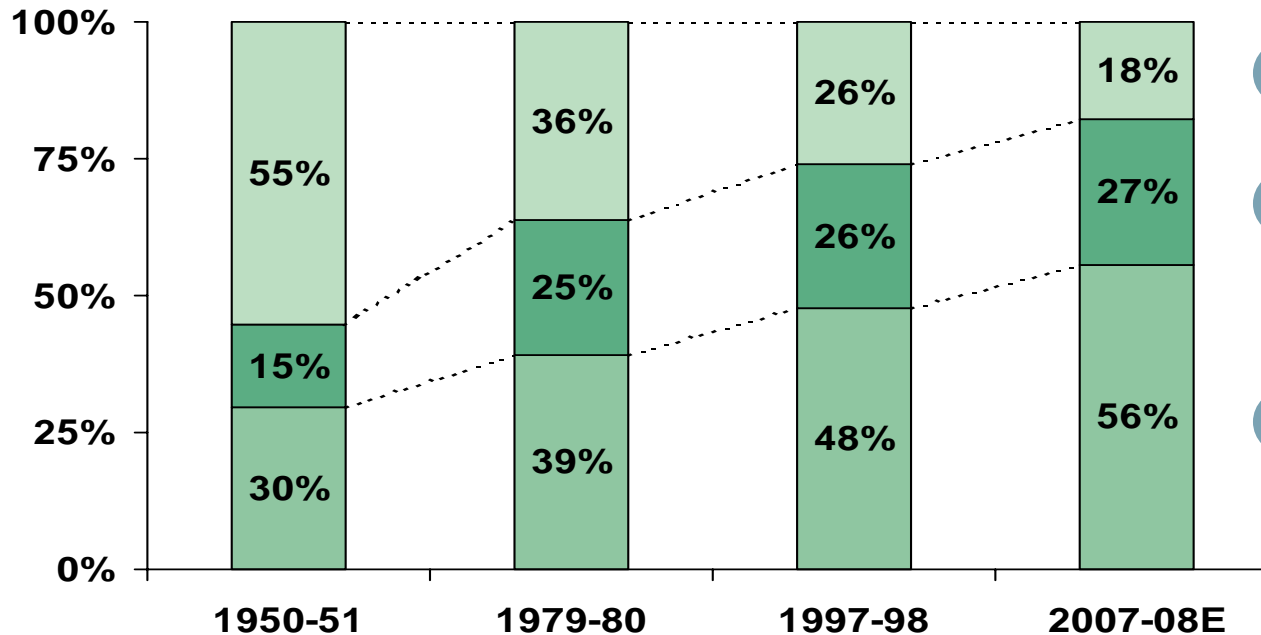
India's pattern of economic growth has been unique

The services sector has led the growth of the Indian GDP, fuelled by increasing education levels

Services sector has grown strongly fuelled by increasing literacy and education levels

India Real GDP CAGR ('98-'08)

% share of GDP at factor cost



- 1 Agriculture 3.1%
- 2 Industry (incl. Construction) 7.2%
- 3 Services 8.8%

Literacy Rate (%)
(estimated)¹



1. Estimates from available literacy rate data from Indiastat
Source: Handbook of Statistics on Indian Economy, RBI (2007-08), Indiastat (<http://www.indiastat.com/india/ShowData.asp?secid=335363&ptid=367635&level=5>)

India's economic past has influenced the present

Five phases of India's economy post independence

1950-1965 Industrial foundation	1965-1980 Import substitution	1980-1990 De-licensing	1990-2000 Liberalisation	2000 onwards Global competitiveness
<ul style="list-style-type: none"> Industrial growth driven by government investments in large public sector enterprises Government investments contributed 53% of total Gross Capital Formation and 92% of all investments in greenfield projects Focus on key infrastructure industries and on being self-sufficient <p style="text-align: center;">CAGR 3.5%</p>	<ul style="list-style-type: none"> Oil shock (1970s) and devaluation of rupee Greater emphasis on self-sufficiency and import substitution Licensing restrictions placed on several industries Continued public sector investments Nationalization of banks and other industries <p style="text-align: center;">CAGR 4%</p>	<ul style="list-style-type: none"> Initial and partial de-licensing in some key sectors Increased growth of private companies Opening of capital goods imports Formation of the first MNC-govt JV – Maruti-Suzuki <p style="text-align: center;">CAGR 5%</p>	<ul style="list-style-type: none"> Economic and payments crisis Broad reforms, reduction of licensing and protection Higher competition, access to technology and imported inputs Higher share of private sector in fixed investment Increased threat perception from China <p style="text-align: center;">CAGR 6%</p>	<ul style="list-style-type: none"> Removal of most import controls Resurgence of key industries Indian companies acquiring companies abroad, gaining global identity Outsourcing boom <p style="text-align: center;">CAGR 7-8%</p>
<ul style="list-style-type: none"> Strong local players in some key industries 	<ul style="list-style-type: none"> Development of process expertise Development of local capital equipment industry Mindset of asset optimization to avoid imports Focus on flexibility rather than scale 		<ul style="list-style-type: none"> Cost reduction and restructuring waves to achieve competitiveness 	<ul style="list-style-type: none"> Innovation and global expansion

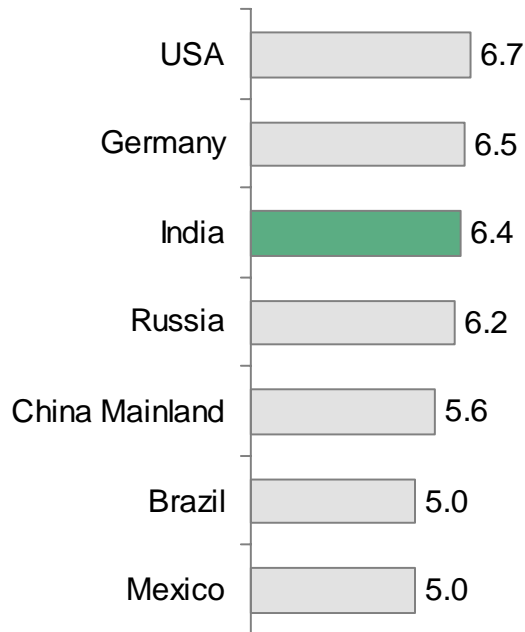
Note: GDP numbers are approximate

India's people its key strength

Based on IMD world competitiveness survey

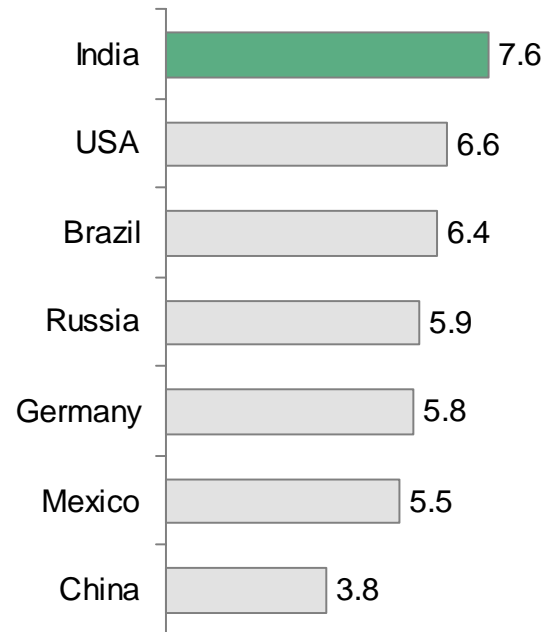
A large pool of skilled people...

Availability of skilled labour, 2007



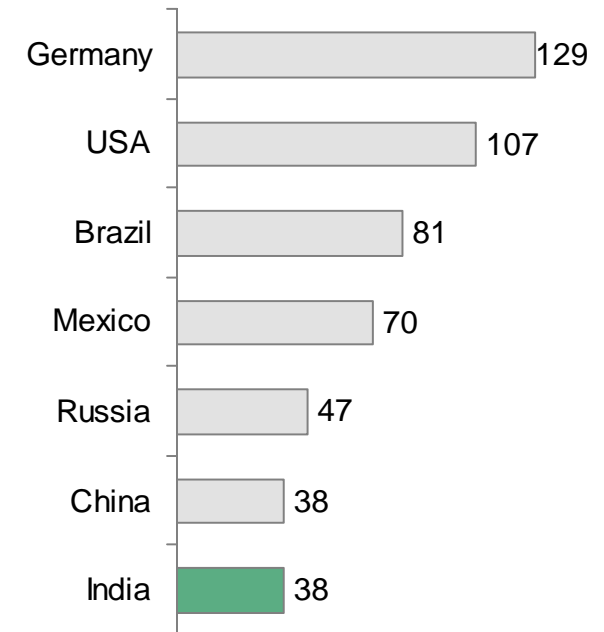
...with high end qualifications...

Availability of qualified engineers, 2007



...and extremely cost efficient

Total compensation for managers /engineers, 2007¹



India is the largest English speaking nation in the world
India has the second largest pool of Scientists and Engineers in the World

1. Compensation is (US\$ '000) and includes salary plus bonuses

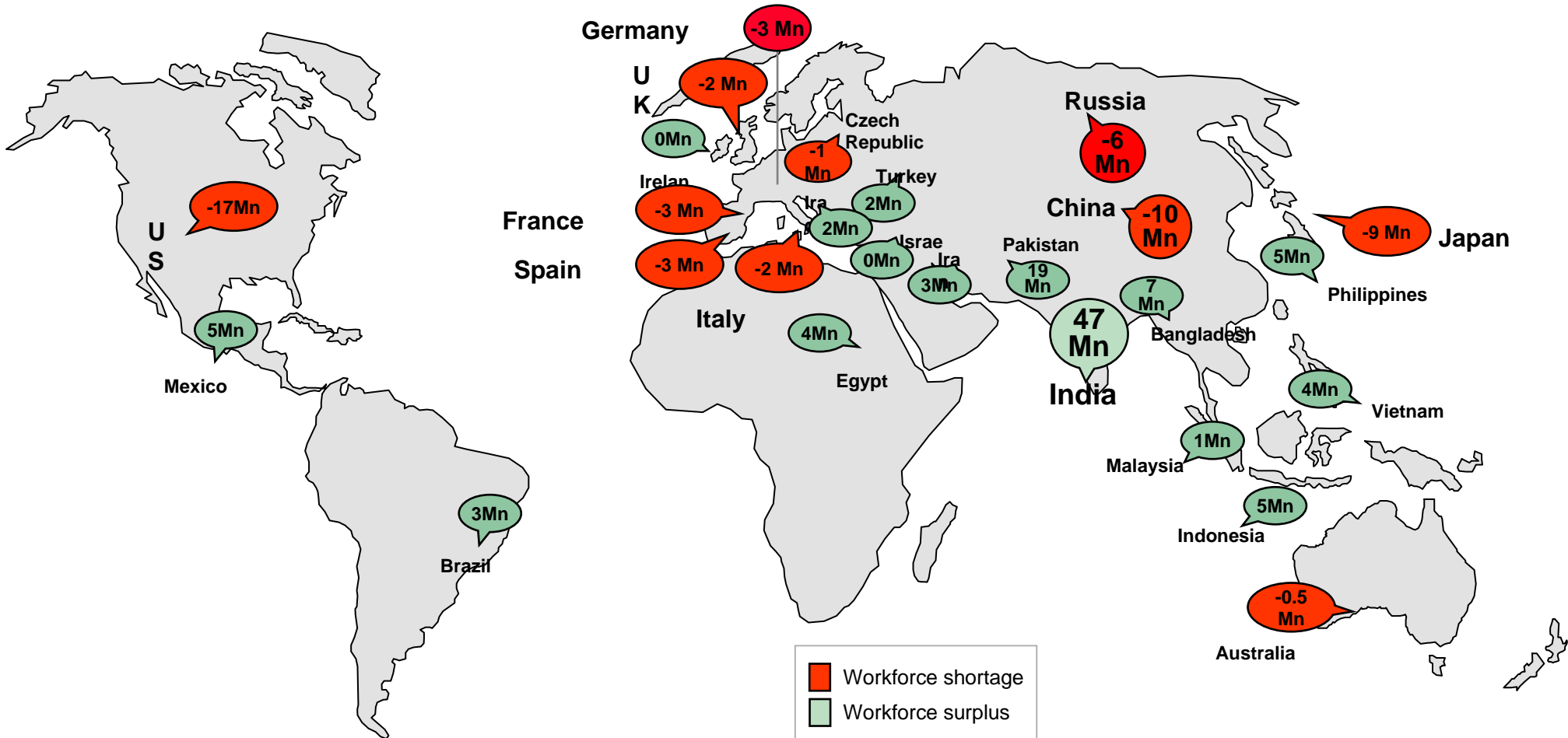
Note: Survey results: 1=low; 10 = high

Source: IMD world competitiveness Yearbook 2007

India likely to remain a source of talent for several years

Workforce surplus in India while other countries face shortages

Potential surplus population in working age group (2020)



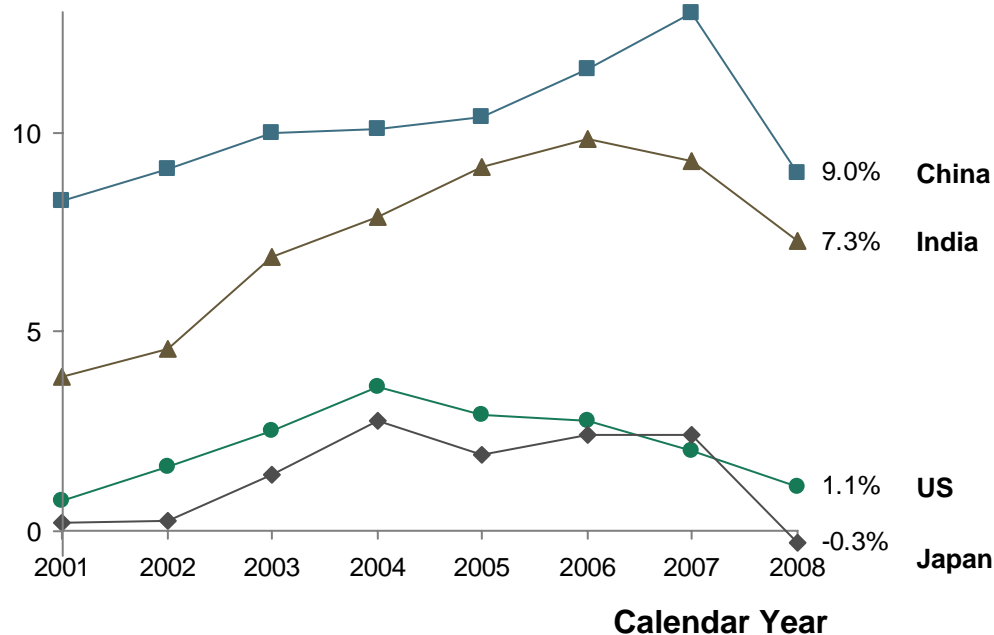
Note: Potential workforce surplus is calculated keeping the ratio of working population (age group 15 – 59) to total population constant and under the assumption that this ratio needs to be broadly constant to support economic growth. Therefore, India will have 47 Million more people in the working age group/total population by 2020 compared to today, while France will have a deficit of 3 Million people in the working age group compared to today.

Source: U.S. Census Bureau; BCG Analysis

Although the downturn has impacted India to an extent, it has not upset the great Indian growth story significantly

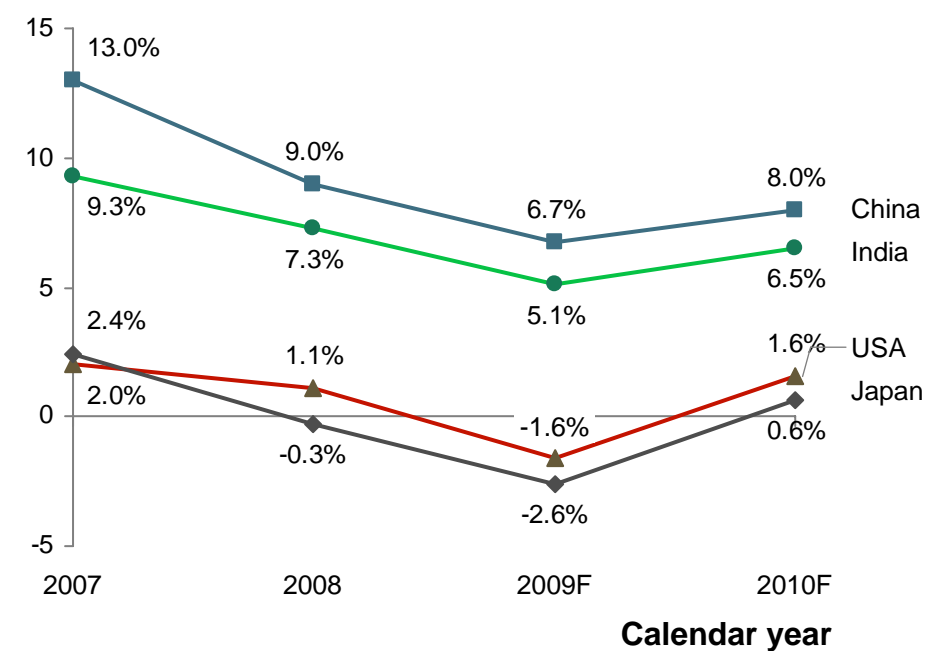
India's growth since 2004 was unprecedented in history, making it the second fastest growing large economy in the world

Real GDP growth at market prices (%)



Although the 2008 crisis hit the Indian economy as well, its impact has not been drastic compared to the rest of the world

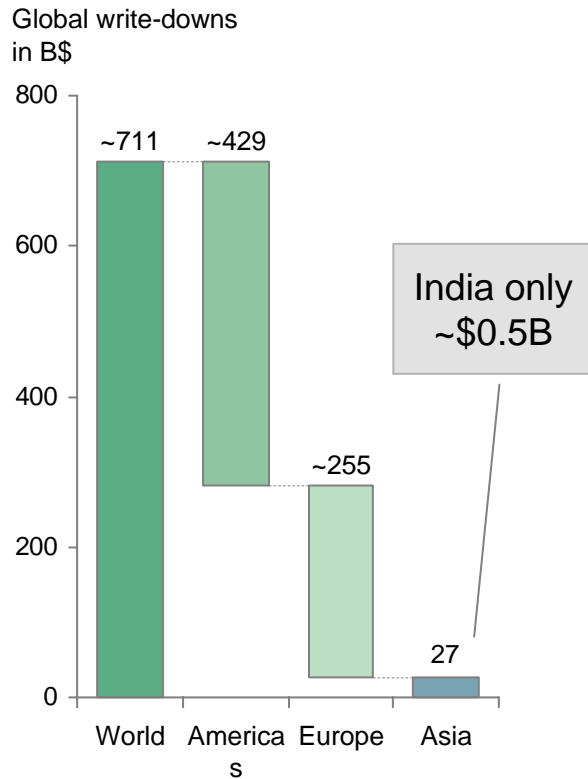
Real GDP growth at market prices (%)



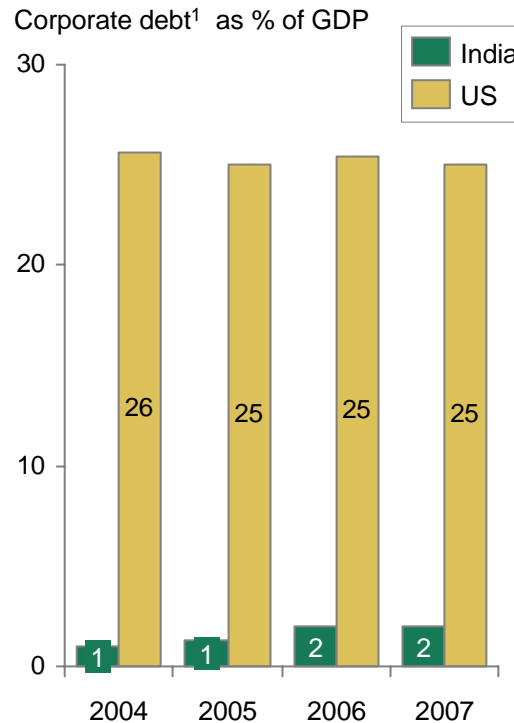
India still poised to remain second fastest growing large economy with strong positive growth

Relatively soft impact of global crisis possibly due to low debt levels in the system

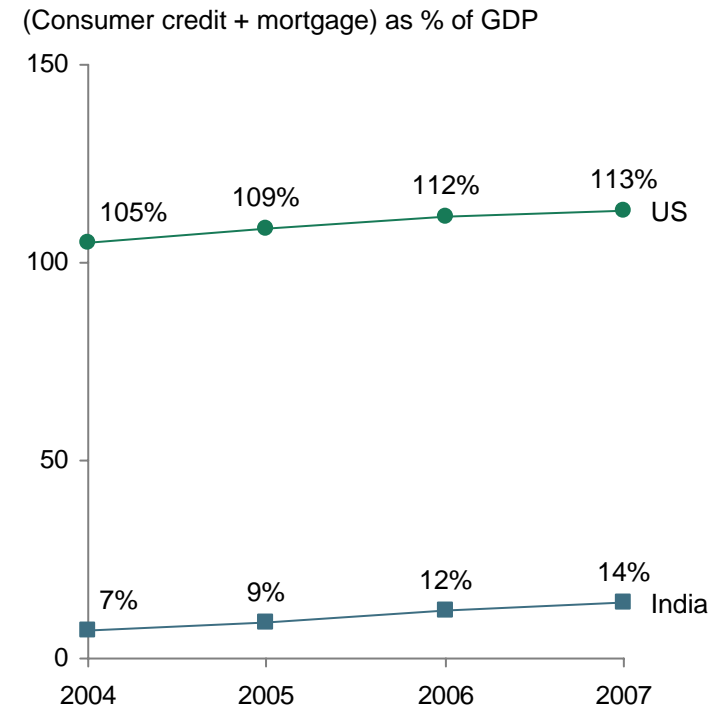
Write-downs by Indian banks a fraction of the global total



Corporate debt as % of GDP is very low compared to developed economies



Consumer credit and mortgage debt is also very low compared to developed economies



1. Domestic corporate debt
Source: EIU, BIS, Press searches, BCG analysis

Summary:

Soft impact of current economic crisis on India; economy likely to bounce back soon

- **As expected, the Indian economy has been impacted to a certain extent by the global downturn. However, the Indian growth story has not been upset significantly, especially compared to other economies**
- **Decline in consumption has been less than in comparable economies**
 - Overall household wealth has shrunk with dropping asset prices, especially in the equities and real estate markets – however, equities and property owned by only a small subset of households
 - Limited impact on employment as employment substantially less reliant on exports than other countries
 - Consumer confidence has dropped drastically in the last one year – however, this drop is considerably lower than most other countries, and on an absolute level, consumer confidence is still strong
 - Access to credit remains restricted since Government measures to inject liquidity into the system have not yet resulted increased credit to consumers and corporates
 - However, consumer credit is a much smaller fraction of GDP than developed countries
- **In recent weeks, all the various parameters, such as the equity market indices, inflation and consumer confidence, have already started on their way to stabilization and improvement**
- **Resulting slowdown in consumption by Indians is likely to be quite soft, and the Indian economy is likely to bounce back from the current situation very soon**

Agenda

India economy overview

Engineering & Construction landscape

Government interventions

Engineering & Construction universe is composed of eight major sectors

1 Residential

- Houses, townhouses
- Apartments, condominiums



2 Commercial & office

- Retail, hotel, malls, banks
- Office buildings



3 Institutional buildings

- Educational establishments
- Public-sector and government buildings
- Hospitals and other health-care facilities



4 Chemicals

- Petrochemical plants
- Basic chemical plants
- Specialty chemical plants



5 Power

- Power plants (nuclear, oil, gas, coal, wood)
- Wind and solar energy facilities
- Electricity T&D



6 Oil & gas

- Exploration: Offshore platforms, piping, etc.
- Oil & gas T&D
- Refineries



7 Other manufacturing & industrial

- Automotive assembly
- Assembly of electrical and electronic components
- Textile plants
- Pulp and paper mills
- Metallurgical plants and steel mills, NF metal plants
- Pharmaceutical, biotechnology plants
- Food and other processing plants, etc.
- Mining facilities
- Others



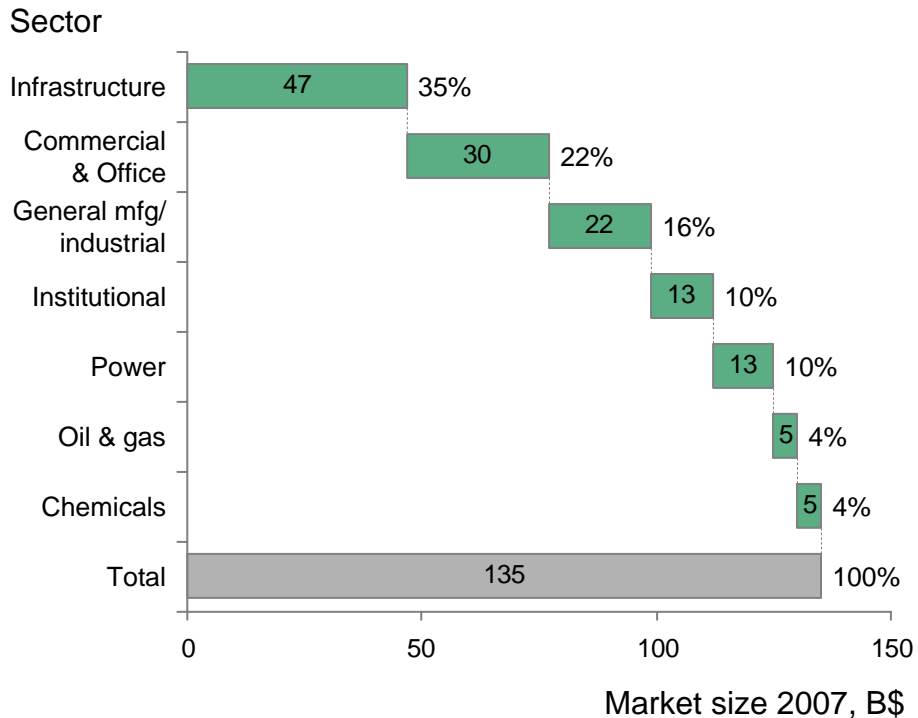
8 Infrastructure

- Transportation
 - Airport systems, bridges, roads, tunnels
 - Canals, sluices, harbor and port facilities
 - Railway systems, etc.
- Water / sewer / solid waste
 - Sewer systems and stormwater sewers
 - Waste water treatment plants, pumping stations
 - Incinerators, industrial waste plants, etc.
 - Piping, distribution networks, irrigation canals
 - Desalination and drinking water treatment plants
 - Pumping stations, etc.
- Telecom
 - Communication transmission lines and cabling systems
 - Tower and antenna systems, etc.

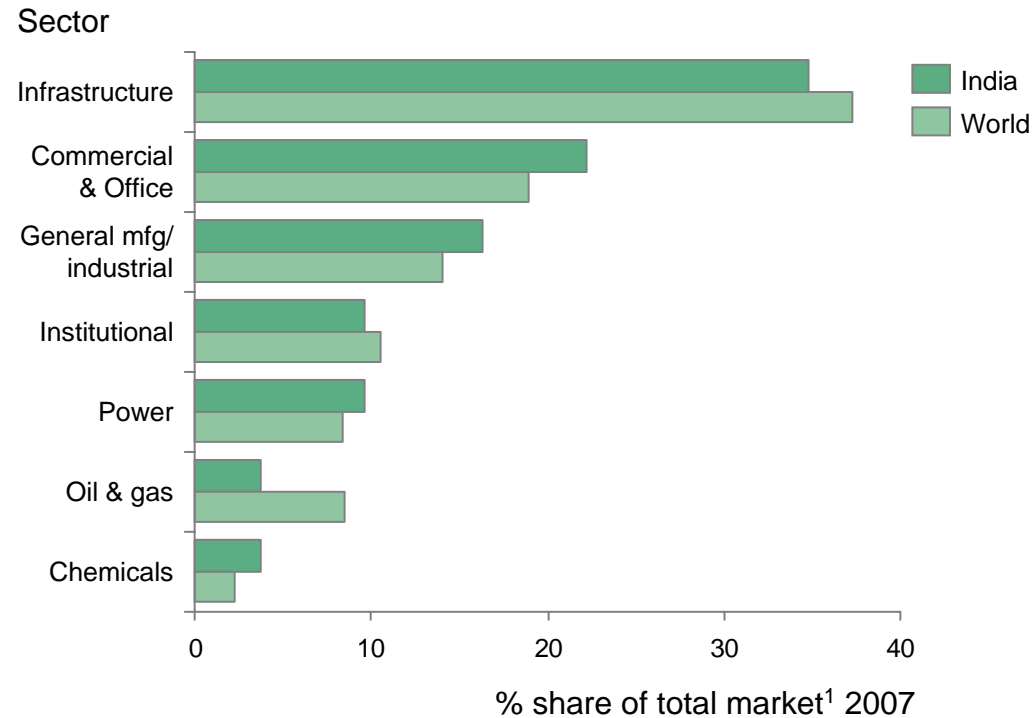


Non residential E&C market in India estimated at US\$ 135bn

Sector wise split of India's Engineering & Construction market



Similar sector-wise split is observed in the worldwide E&C market



1. Excluding residential
Source: Global Insights, IEA 2006 and 2007 WEO reports, CMAI forecasts, BCG analysis

India among the fastest growing market across all segments over the next 10 years

Segment	North America	South America	Africa	Mid East	Europe	Russia	India	China	Rest of Asia	Total
Commercial and office	2.8%	7.1%	4.1%	8.1%	3.8%	8.3%	9.8%	12.5%	2.4%	4.9%
Institutional	2.5%	6.8%	3.6%	6.6%	3.4%	5.2%	9.1%	10.9%	1.6%	4.1%
Chemicals	2.7%	7.3%	4.6%	7.1%	3.9%	8.7%	9.2%	12.6%	3.2%	6.6%
Power	2.2%	5.9%	4.5%	6.1%	2.4%	6.2%	9.7%	(2.3%)	5.7%	2.4%
Oil & gas	2.1%	7.6%	6.6%	6.7%	3.9%	7.3%	8.3%	8.4%	6.2%	5.1%
General manufacturing/ industrial	3.5%	7.1%	4.4%	6.6%	3.4%	7.9%	9.1%	12.5%	2.6%	7.9%
Infrastructure	2.6%	5.2%	6.6%	7.4%	3.5%	8.6%	10.6%	16.4%	2.0%	6.2%
Total	2.6%	6.0%	5.8%	7.2%	3.5%	7.7%	9.8%	12.5%	2.7%	5.7%

Growth rate 2007–16 real CAGR (%)

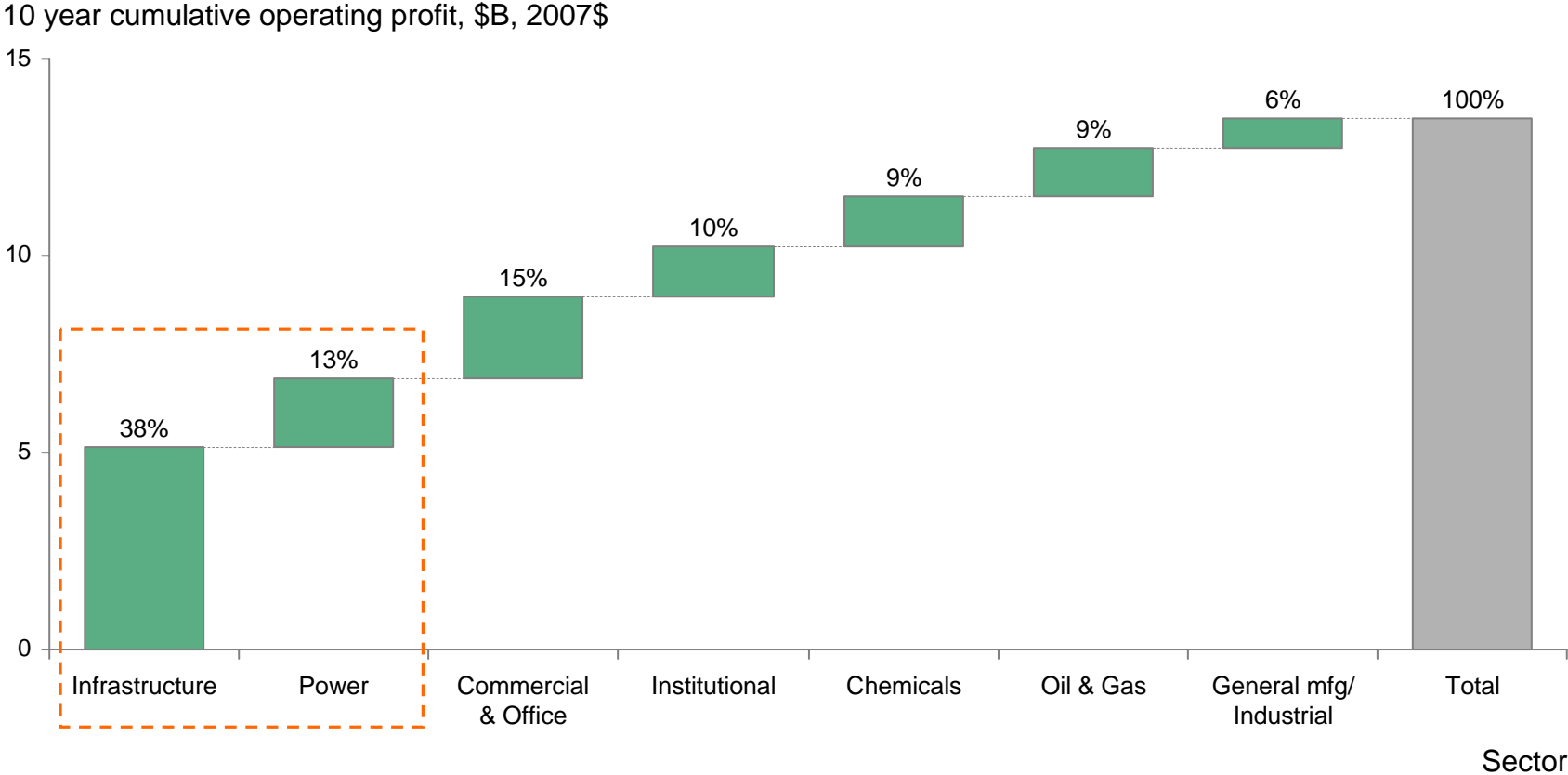
- < 4
- 4–8
- > 8

Strong growth forecasted in India across all sectors of the E&C industry

Note: China's Power CAGR negative due to aggressive new builds in 2005-2007; projections call for slight reduction relative to 2007 spend over next 10 years
 Source: Global insights; IEA 2006 and 2007 WEO reports, CMAI forecasts, BCG analysis

Infrastructure and power segments to account for >50% of industry profit pool in India over the next 10 years

Estimate of major EPC addressable profit¹ pools in India for 10-year period from 2008-17

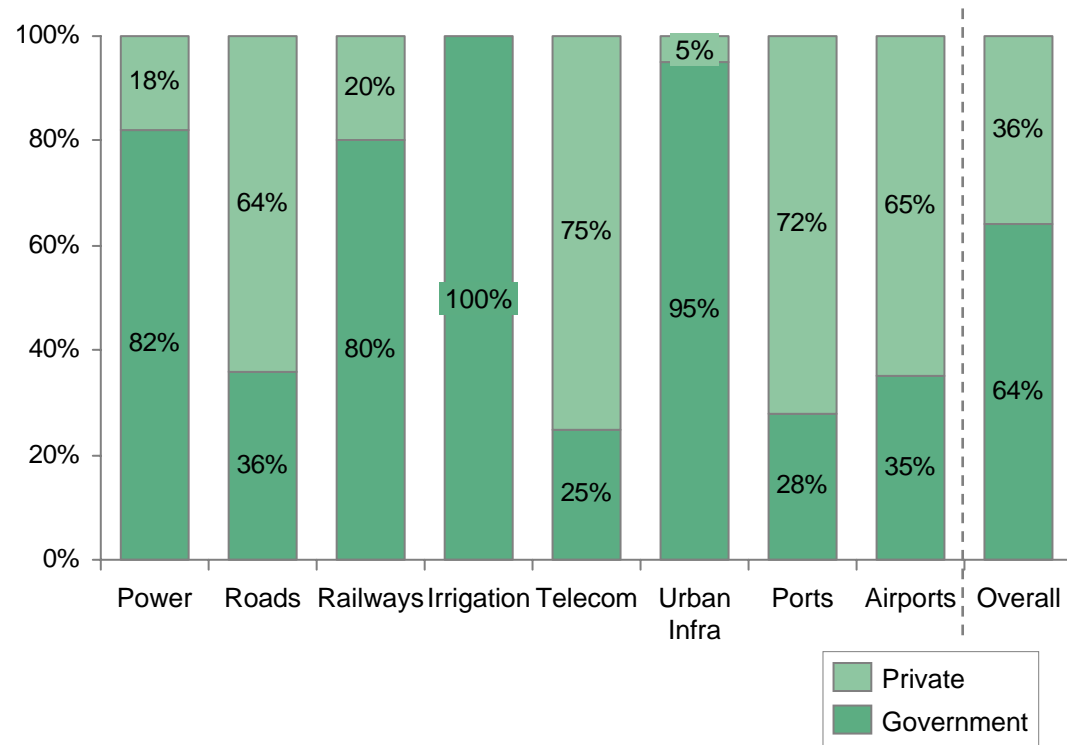
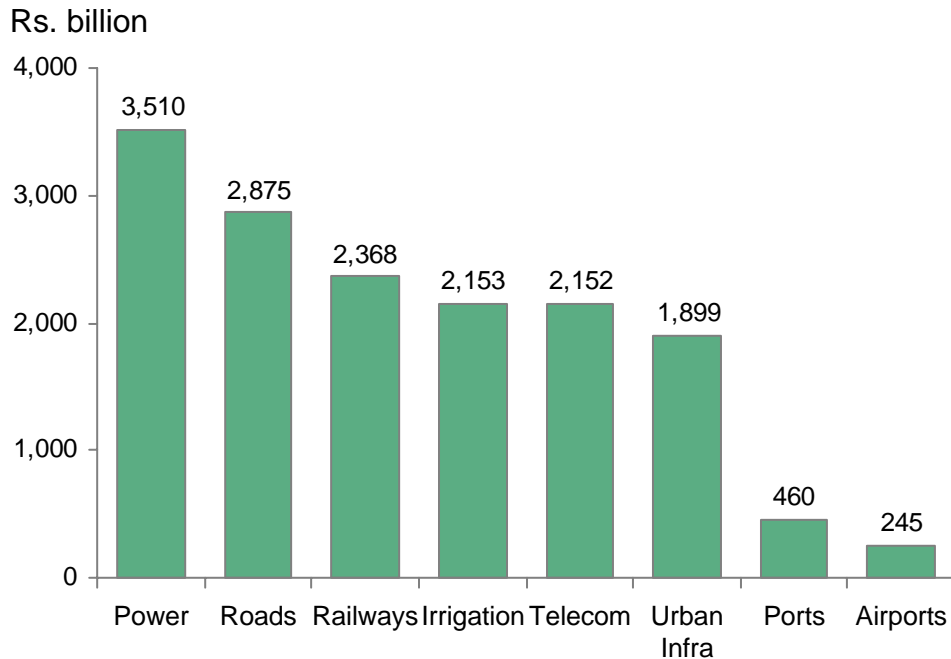


1. Based on sector participation of top 100 global EPC firms; total construction demand scaled down (by sector) to match top 100 EPC sector participation
 Note: Estimates based on 2007 construction demand market sizes, projected 10-year real CAGR, and average operating profit margins within sectors
 Source: Global insights; IEA 2006 and 2007 WEO reports, CMAI forecasts, BCG analysis

Indian Government and private sector expected to invest heavily in power and infrastructure despite slowdown

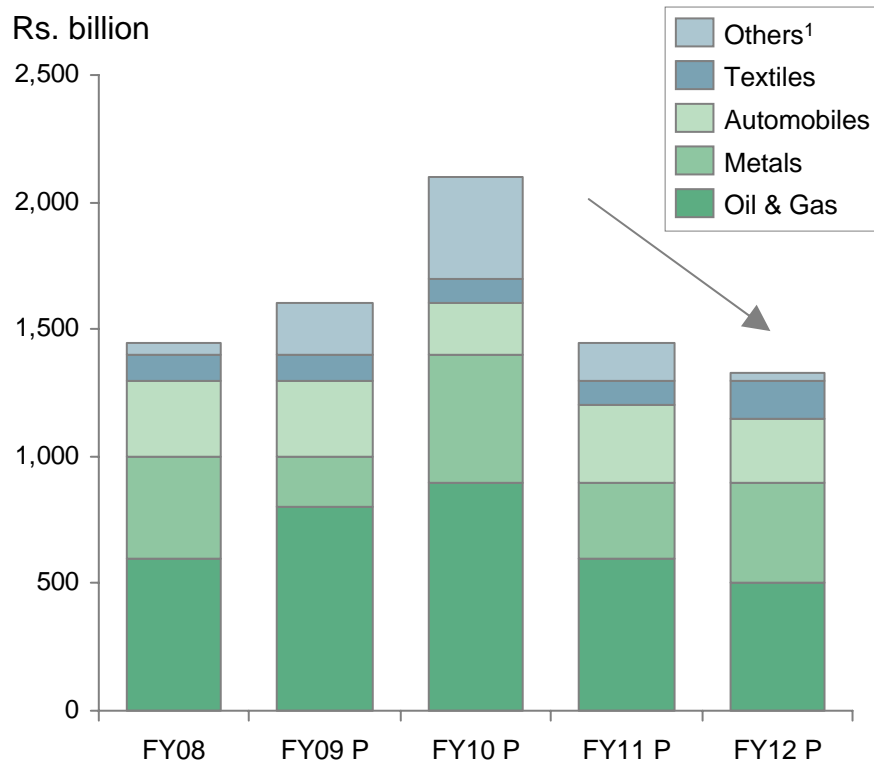
Robust investments expected in Power, Infrastructure and Buildings sectors between 2008-09 and 2009-10

Sector-wise govt. vs private participation –



However, investments in industrial construction could slow down post 2010-11

Segmental split of industrial construction investments over the next few years



Industrial construction will see greater deceleration than infrastructure investments

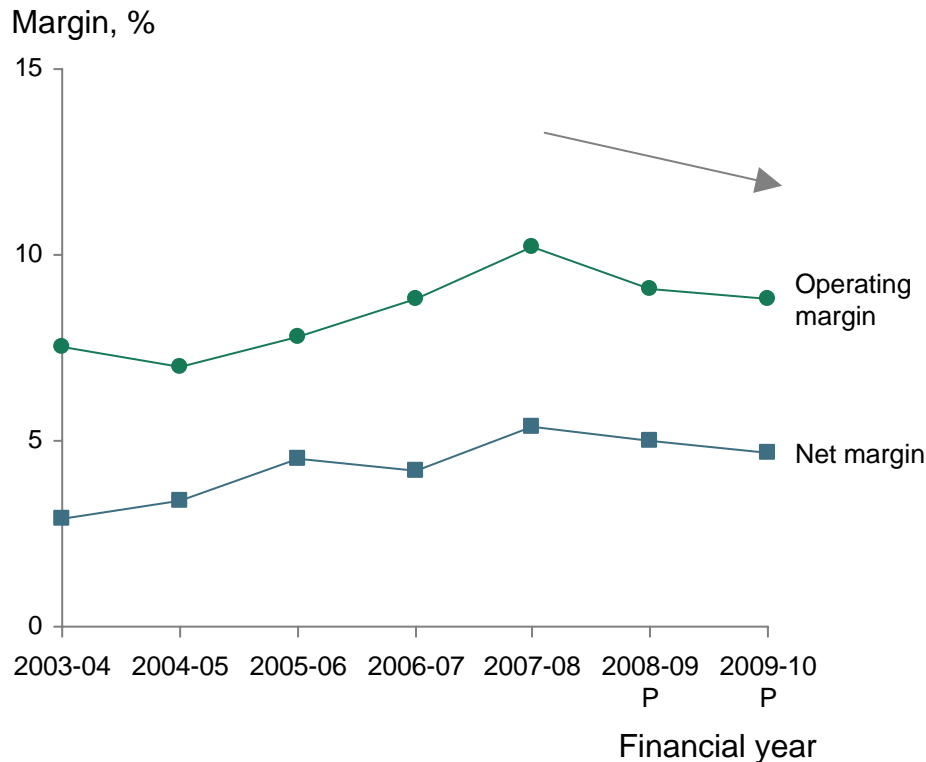
Industrial capex to be commissioned till 2009-10 expected to be on track

However, capex post 2010-11 would be severely affected as players are postponing expansion plans due to

- Liquidity crunch
- Expected slowdown in demand

Construction companies also likely to witness a decline in profitability

Margins set to decline in 2008-09 and 2009-10



The economic crisis has affected the industry in several ways




Operating margins will go down due to

- Change in turnover mix of the construction industry
- Higher intensity of competition in response to the expected slowdown in order flow




Net margins will also decline as

- Cost of borrowing has increased with the hardening of interest rates adversely affecting BOT projects

Three key mega trends set to impact the Indian E&C market

Trend	Description	Implications	
1 Urbanization	<ul style="list-style-type: none">• Trend towards larger, denser cities and higher urban share of total population	<ul style="list-style-type: none">• Rising demand for high-volume low-cost housing• Increasing infrastructure spending on roads, public transport, water supply, sanitation	
2 Rising income levels	<ul style="list-style-type: none">• Rapid population increase• Emergence of multinational firms from developing economies like India	<ul style="list-style-type: none">• Future global capex will shift from US and Europe to countries like India• New competitive threats from India to developed countries	
3 Green – Energy scarcity and sustainability	<ul style="list-style-type: none">• Increasing consumer, business and government awareness of energy conservation and carbon footprint	<ul style="list-style-type: none">• Increasing use of alternative power sources: nuclear, solar panels, wind, geo-thermal• Potential investment in carbon capture technology	

Overall, three key mega trends impacting Indian E&C market

Trend	Description	Implications	
1 Urbanization	<ul style="list-style-type: none">• Trend towards larger, denser cities and higher urban share of total population	<ul style="list-style-type: none">• Rising demand for high-volume low-cost housing• Increase in infrastructure spending on roads, public transport, water supply, sanitation, disposal	
2 Rapid income growth	<ul style="list-style-type: none">• Rapid and significant increase in income levels• Shift from an agrarian economy to industry/services led economy	<ul style="list-style-type: none">• Increase in consumerism• Rising demand for all types of consumer products and services	
3 Energy scarcity and sustainability	<ul style="list-style-type: none">• Power deficit even today• Substantial growth in power needs with rising demand for products & services• Emerging awareness on sustainability and carbon footprint	<ul style="list-style-type: none">• Significant investment in power• Willingness to explore alternative power sources: nuclear, solar panels, wind, geo-thermal	

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Engineering & Construction landscape

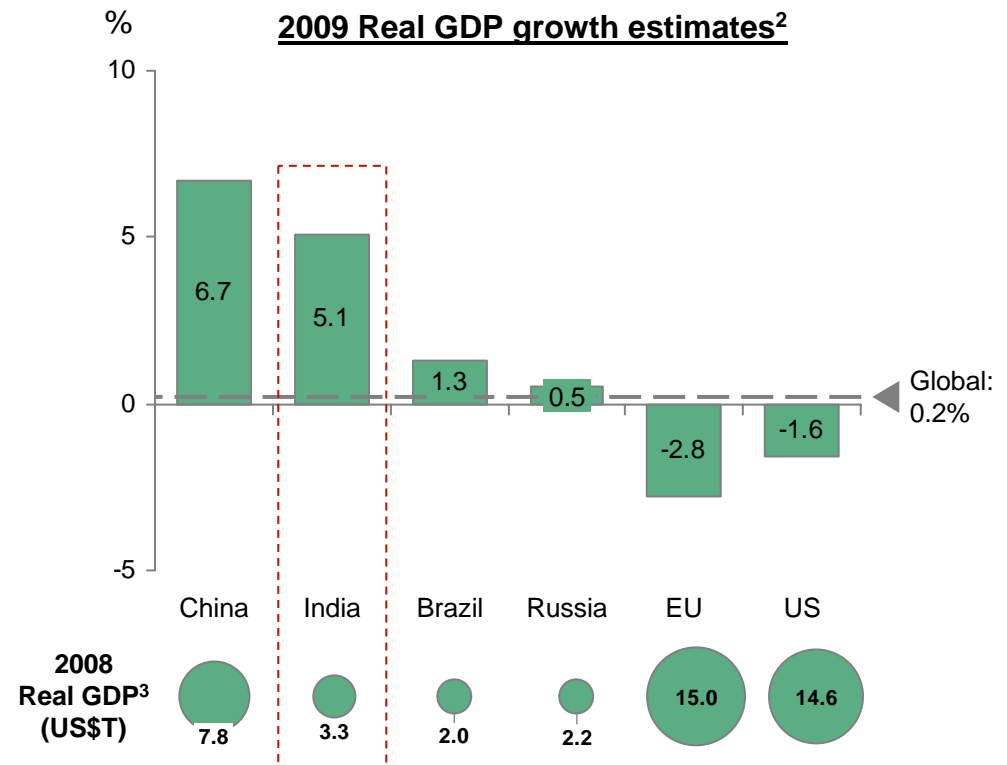
Government interventions

Indian Government has stepped in actively to ensure robust growth for the economy

Government policies have provided solid foundation to growth, and stimulus in downturn

- **Solid financial underpinnings**
 - Conservative and gradual approach to financial sector reforms process
 - Building of safeguards by the government to ensure stability
 - Minimal exposure to sub-prime and related assets due to strict regulations by RBI¹
- **Central gov't has acted fast and aggressively**
 - Several policy interventions in the last few months to inject liquidity into the system
 - CRR, SLR, repo rate and excise duty cuts in place since October 2008
- **INR 3,600 billion of additional funds made available in the economy through policy interventions**

...India is expected to deliver >5% GDP growth in 2009 - key growth engine for global economy



1. Reserve Bank of India
Source: Analyst reports, IMF, press search, BCG analysis

2. Estimates from Goldman Sachs Global ECS Research; EIU; IMF

3. Estimates from CIA Factbook

Strong political mandate to ruling party in recent elections

Ending several years of weak Government hampered by conflicting demands of coalition partners

New York Times comment on India going to the polls "The World's biggest exercise in Democracy"

"It is truly the greatest show on Earth, an ode to a diverse and democratic ethos, where 700 million + of humanity vote, providing their small part in directing their ancient civilization into the future. ...

...where 3 Muslim Presidents have been elected, where a Sikh is Prime Minister and the head of the ruling party a Catholic Italian woman, where the President is also a woman, succeeding a Muslim President who as a rocket scientist was a hero in the nation...

... where a booming economy is lifting 40 million out of poverty each year and is expected to have the majority of its population in the middle class by 2025; where its optimism and vibrancy is manifested in its movies, arts, economic growth, and voting, despite all the incredible challenges and hardships; where all the great powers are vying for influence, as it itself finds its place in the world...

...Where all of this is happening, is India, and as greater than 1/10 of humanity gets ready to vote, it is an inspiration to all the World"

New York Times, 15 April 2009

Government needs to 'unlock' investments in infra/power

Given strong political mandate in recent elections

Key issues

Expected govt. action

Infrastructure spending

- Actual infrastructure spending lagging behind that required for productive operation of resources and sustained GDP growth
- Private investments will be uncertain in downturn

- Accelerated infrastructure spending especially in sectors such as roads, railways and electricity

Improvement in public finances

- Pro-cyclical fiscal policy of the govt. has taken deficit and public debt to very high levels, leading to higher real interest rates for the private sector
- High debt results in lower govt development spending

- Correction of public finances in 12-18 months thereby reducing risk of crowding out private investments and improving govt. spending mix

Divestment of stake in govt. companies

- High level of fiscal deficit will make it difficult for govt. to increase spending to support growth
- Divestment needed to augment financial resources - suffered due to opposition from Left in previous govt.

- Increase in divestment proceeds

Increase in stable capital inflows

- ~85% of capital inflows in last 4 years were in the form of less stable non-FDI flows as compared to a ratio of 31% for other top ten emerging markets

- Increase in pace of reforms will aid in increasing share in capital flows allocated to emerging markets

Deregulation measures

- Several long-pending reforms of the pension funds, banking and retail sector held back due to opposition from the Left

- Implementation of deregulation measures in these sectors