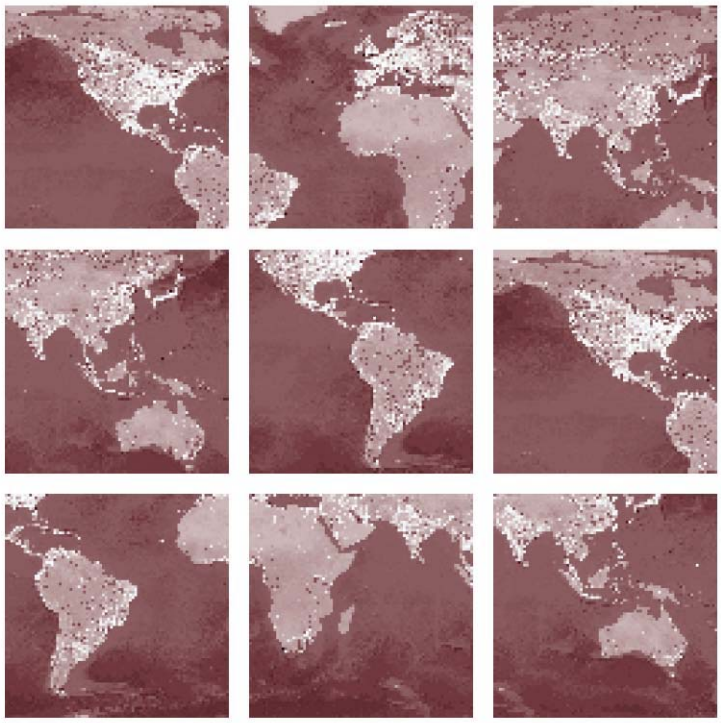
CHAPTER ONE

INDIA'S RISING GROWTH POTENTIAL

January 2007



INDIA'S RISING GROWTH POTENTIAL

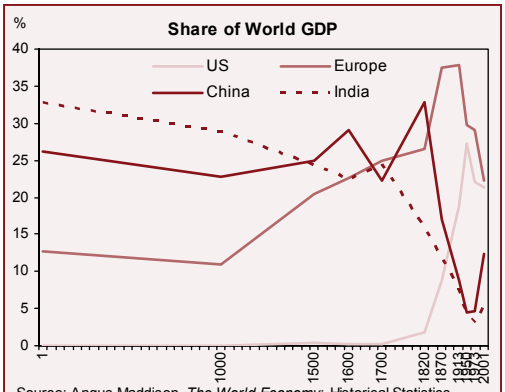
India's Scope for Catch-Up

On the eve of the Industrial Revolution (around 1770), India was the second-largest economy in the world, contributing more than 20% of total world output. By the 1970s, after two centuries of relative economic stagnation, that share had fallen to 3%—the lowest in its recorded history. From a long-term perspective, the post-industrial economic decline of India (and China) is a historical aberration, driven to some extent by a lack of openness. After independence in 1947, India followed inward-looking and state-interventionist policies that shackled the economy through regulations, and severely restricted trade and economic freedom. The result was decades of low growth, pejoratively termed the 'Hindu rate of growth'. Reforms beginning in 1991 gradually removed obstacles to economic freedom, and India has begun to play catch-up, steadily re-integrating into the global economy.

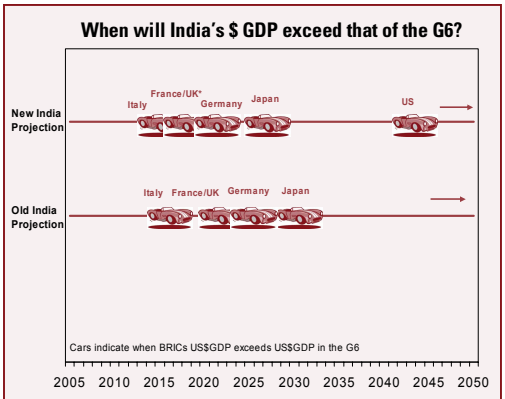
Since 2003, India has been one of the fastest-growing major economies, leading to rapid increases in per capita income, demand and integration with the global economy. Will India be able to sustain, or even increase, its high growth rates over the medium term? If so, what will be the implications of India's re-integration into the global economy for world demand growth?

We argue that there has been a structural increase in India's potential growth rate since 2003 on the back of high productivity growth. In this paper, we explain why productivity (by which we mean total factor productivity, or the manner in which all inputs are combined to achieve more output) has surged, and why we think this is likely to continue over the next decade.

Our baseline projections for India's potential output growth show that the economy can sustain growth rates of about 8% until 2020, significantly higher than the 5.7% that we projected in our original BRICs paper. The key underlying assumption is that the government will continue to implement growth-supportive policies. The implications of this are that India will overtake the G6 economies faster than envisaged in our earlier BRICs research. Indeed, India's GDP (in US Dollar terms) will surpass that of the US before 2050, making it the world's second-largest economy. India's contribution to world growth will also be high and increasing.



Source: Angus Maddison, *The World Economy:* Historical Statistics, OECD 2003.



Source: CEIC, Goldman Sachs Research estimates.
Note 1: India's $ GDP is projected to exceed that of the UK a year after it surpasses France in both our old and new forecasts.

Note 2: Our new projections for India's potential growth envisage an average growth of 6.9% in 2006-2050. We also assumed the same exchange rate changes till 2050 as in the original BRICs projections. Under the original BRICs projection, India would become the third largest economy by 2050.

The higher growth rate under our new projections will have significant implications for demand in India. From 2007 to 2020, India's GDP per capita in US Dollar terms will quadruple (one-third higher than the original BRICs projections). Indians will also consume about five times more cars (up from 3.5 times) and three times more crude oil (up from 2.3 times).

Comparisons with other countries that have experienced similar rapid rates of growth show that India is firmly on the growth expressway. There is considerable scope for catch-up and, even with our baseline projection, the speed of India's growth transition is not implausible when compared to the growth experiences of other East Asian countries.

A turnaround in manufacturing productivity since 2003 has been crucial. The proximate cause is the increase in efficiency of private-sector firms in the face of growing competition. The gradual opening up of the economy introduced a competitive dynamic, which forced the private sector to restructure during the relative slowdown in growth and corporate profitability during 1997-2002. After the restructuring, the private sector emerged leaner, fitter and more productive.

The underlying causes for the increase in efficiency of private firms have been trend accelerations in international trade, financial sector growth, and investments in and adoption of information and communication technology. These are also the cumulative effects of a decade of reforms.

The re-allocation of land, capital and especially labour from low-productivity agriculture to high-productivity industry and services is an essential dynamic behind sustained productivity growth. This process is being accelerated by higher returns in industry and services due to trade openness, cheaper credit, investments in IT and communications, and the building of highways. These processes are in their initial stages and have substantial distance left to run.

The upside to our baseline projections is significant. Thus far, the economy has logged high growth rates without significant increases in domestic or foreign direct investment. If it can accumulate significantly more capital to add to its favourable demographics and ongoing productivity gains, India could reach a growth rate of 10% by 2010 and sustain it thereafter. We show various combinations of factors that are necessary to achieve this.

The downside risks to our baseline growth projections come from a slowdown or reversal of reforms in part due to political or social instability, supply-side constraints to doing business that include shortfalls in educational attainment, and environmental degradation.

Based on our analysis, we would emphasise the 'FORCE' factors as critical to sustaining growth: Financial deepening, Openness to trade, Rural-to-urban migration, Capital deepening, Education and Environment.

Productivity Accelerates

India's growth performance since independence in 1947 has been well below potential, stymied by low productivity. From 1960 to 2000, annual total factor productivity (TFP) growth averaged a mere 0.25%. Tentative steps to reform the economy in 1985, and then fundamental reforms since 1991, moved the economy up a gear, with growth averaging 6% and TFP growth moving up to an average of 1.6% per year.

To estimate the productive capacity of India's economy and understand its sources of growth, we used a supply-side approach, distinguishing between contributions of TFP and of inputs of capital, labour and human capital, to obtain the underlying 'potential' or trend growth rate. We first stripped out all cyclical variations in inputs to calculate the trend. We then cyclically adjusted productivity growth to obtain the trend. By measuring the 'potential', we seek to estimate the rate at which the economy can grow without 'overheating' or igniting inflation. This rate is useful as it provides a benchmark against which to assess actual growth outcomes.

Since 2003, there has been a structural increase in India's potential growth to nearly 8% from 5%-6% in the previous two decades. Productivity growth has been the key driver behind the jump in GDP growth, contributing nearly half of overall growth since 2003, compared with a contribution of roughly one-quarter in the 1980s and 1990s.

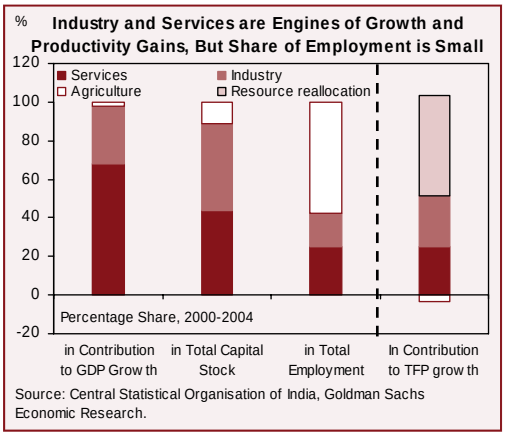
The growth drivers: Services and industry

We then sub-divided growth into the key sectors of agriculture, industry and services. Industry is increasingly becoming an important growth driver, contrary to conventional wisdom that growth in India is only services-led. A quarter of services are directly linked to industry, in sectors such as trade, transport, electricity and construction.

Recent increases in productivity are in part due to a turnaround in industry productivity, which has rebounded from negative to positive. Services productivity has remained strong over the past few decades. Labour has moved into industry from agriculture, while capital has moved to services since 2002.

In India, labour is nearly four times more productive in industry and six times more productive in services than in agriculture, where there is a surplus of labour. Economic theory tells us that as labour moves from low-productivity sectors (such as agriculture) to high-productivity sectors (such as industry or services), overall output must improve.

We estimated the output gains due to labour migration from agriculture to services and industry, and found that in recent years, this move has contributed upwards of 0.9 percentage points (ppt) to overall growth. The gains are roughly equally split between agricultural labourers moving to industry and to services.



Source: Central Statistical Organisation of India, Goldman Sachs Economic Research.

Average growth (% chg yoy)

	GDP	TFP	Capital Stock	Employment	Education Attainment
Agriculture					
1981-1990	3.5	0.5	2.1	1.1	2.3
1992-1996	4.7	1.8	2.0	1.2	2.0
1997-2001	2.0	-0.4	1.3	0.6	2.3
2002-2004	1.3	-1.0	1.5	0.4	2.2
Industry					
1981-1990	7.0	0.5	7.5	3.4	2.3
1992-1996	7.3	1.2	9.0	2.0	2.0
1997-2001	**4.5**	**-1.2**	5.4	3.7	2.3
2002-2004	**7.7**	**1.9**	3.9	4.7	2.2
Services					
1981-1990	6.7	1.6	3.3	3.5	2.3
1992-1996	7.5	2.2	4.7	3.2	2.0
1997-2001	8.2	2.8	4.2	3.3	2.3
2002-2004	8.5	3.0	5.8	2.8	2.2

Source: Central Statistical Organisation of India, Goldman Sachs Economic Research.

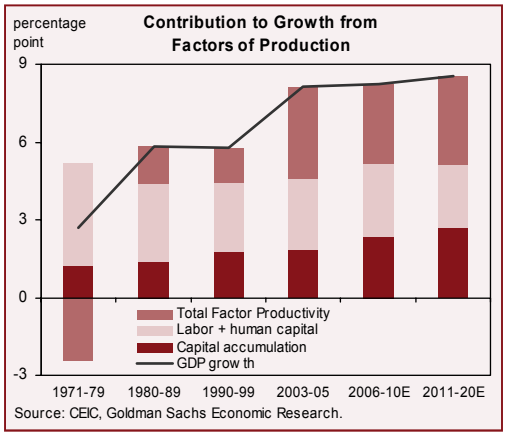
Given that the movement from agriculture to other sectors (which in India's case is roughly equivalent to the move from rural to urban areas) is still in its initial phase, we expect the gains to increase and continue for several decades. Agriculture still employs close to 60% of the labour force, with negative marginal productivity.

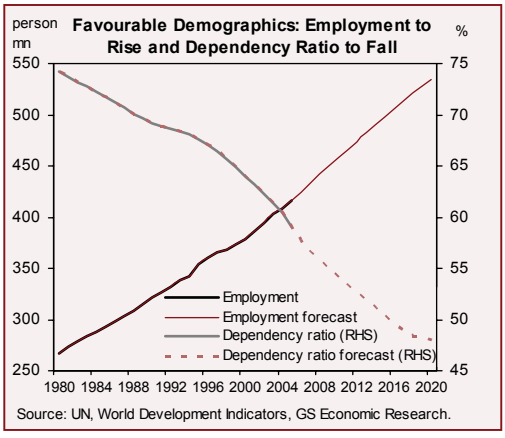
Our Baseline Projections

Based on our supply-side framework, we projected potential growth rates for India till 2020. The chart below shows our projections for the overall growth rate, and contributions from productivity, capital, labour and education. Keeping current rates of savings and investment roughly constant, we project India's potential growth rate at an average of 8.4% till 2020, on the back of continued productivity growth, favourable demographic factors and further growth in educational attainment.

Our baseline scenario is derived from fairly conservative assumptions:

- The **investment/GDP** ratio is assumed to remain roughly constant at around 29% of GDP (in real terms).
- The growth rate in average years of **schooling** is assumed to decline gradually in line with trend. This means an increase in average years of schooling from 5.8 in 2006 to 7.3 by 2020.
- For the labour input, according to demographic trends, over 100mn people will enter the **labour force** by 2020. We assume no increases in labour force participation rates and that the rate of unemployment stays at its natural rate (4.4%, the average unemployment rate from 1977-2005). If participation rates were to increase by a quarter of a percent each year from the current rates of 61%, this would add another 25mn to the labour force in the next 10 years.
- For **TFP growth**, we assume an average annual rate of 3.3%. We think this is a reasonable assumption based on the large scope for catch-up, the continued movement of labour and land from agriculture to other sectors, aided by continued openness to trade, financial deepening, investments in information and communication technology, and the building of highways. These are discussed at length below.





Why Productivity Growth Is Likely to Be Sustained

The proximate cause of the increase in productivity since 2003 is the increased efficiency of private-sector firms in the face of growing competition. The gradual liberalisation of the economy introduced a competitive dynamic that forced the private sector to restructure during the relative slowdown in growth and corporate profitability during 1997-2002. After the restructuring, the private sector emerged leaner, fitter and more productive. The presence of constraints, including the lack of adequate infrastructure and a set of demanding, value-conscious consumers, forced companies to innovate on products, processes and distribution, which, in turn, created companies that are more efficient and competitive.

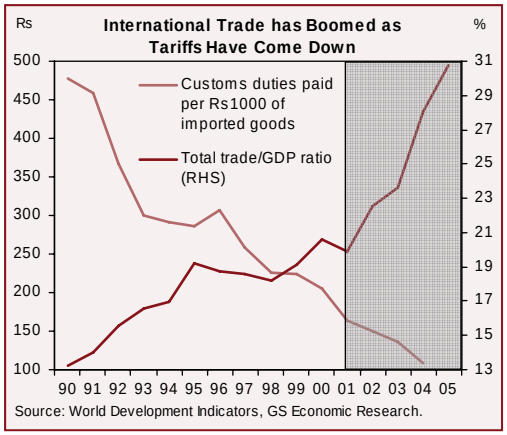
In our view, the underlying causes for the increase in efficiency of private firms have been trend acceleration in international trade, financial deepening, and investments in and adoption of information and communication technology. The process that tentatively began after the onset of reforms in 1991 is also the cumulative effect of a decade of liberalisation, a vital component of which was the gradual deregulation and de-licensing of industry.

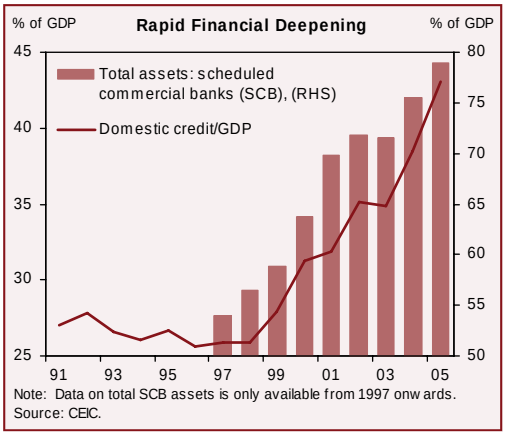
Reason 1: India opens up

With the onset of reforms in 1991, India began to unshackle its closed economy by gradually lowering its very high trade barriers and boosting exports. Average tariffs fell to below 15% from as high as 200% as the country began to re-integrate into the global economy. The impact of opening up has been significant. Exports have risen 14 times as India has rapidly gained trade share. This development has been most evident in the past three years, when trade has grown, on average, 25% a year.

Increased openness has contributed significantly to increasing productivity:

- It provided domestic firms with access to superior inputs, ideas and technology.
- The increased competition from actual and perceived imports has focused domestic firms on the need to improve efficiency as critical to survival.
- It has rewarded the most efficient firms while penalising the most inefficient domestic firms, thereby improving average productivity.





What Will It Take to Reach 10% Growth?

India's current growth rates of around 8% have been achieved without large increases in domestic capital accumulation or foreign direct investment, raising the possibility that increases in investment could boost growth further. As the left-hand chart below illustrates, India is well below its efficiency or productivity frontier, due to inefficiencies in production. The curve represents all optimal points of combining inputs into output, i.e., the 'production possibilities frontier'. Currently, India is at point A; elimination of inefficiencies, or higher productivity growth, would lead it to point B. If it can increase its input of capital, it could move to point C with higher output. Continued catch-up due to technological innovation would lead the curve to expand outwards, thus increasing growth output.

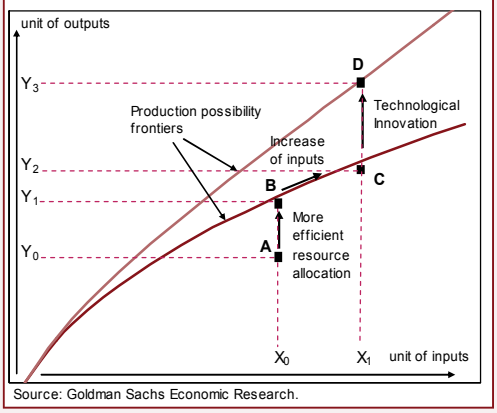
To determine the amount of investment required to reach 10% growth, we mapped out two scenarios based on different productivity growth rates: either 3% or 3.5% on average until 2020. For the labour and education input, we use the same assumptions as the baseline. Based on these assumptions, we calculated the real investment/GDP ratio required to reach and sustain 10% growth until 2020.

If we assume more optimistically that productivity growth is sustained at 3.5%, the required increase in the investment/GDP ratio is of the order of 16%. Thus, India would have to boost its savings rate by roughly 16% of GDP, through a combination of domestic and foreign savings, in order to finance the investment required for a sustained 10% growth. Below, we assess whether this is feasible. If productivity growth were to decline to 3%, then 10% growth would be unsustainable. The large difference in required investment in the two scenarios is due to cumulative effects: a higher capital stock requires still higher investment to compensate for depreciation effects.

How much of a constraint is India's savings rate?

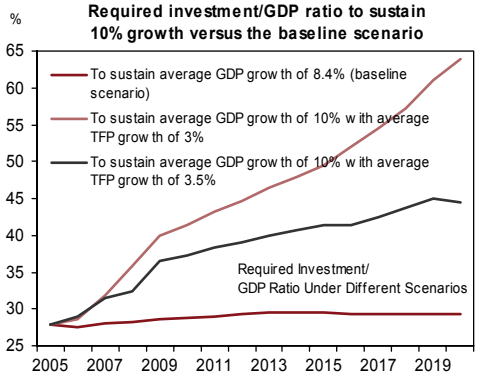
India's savings rate is low compared with that of its East Asian neighbours, which raises concerns that the domestic savings constraint may not allow the kind of investment rates needed for high growth. Therefore, our baseline projections assume roughly constant investment/GDP rates, obviating the need for a rising savings rate.

Production function and the Sources of Growth



Source: Goldman Sachs Economic Research.

Required investment/GDP ratio to sustain 10% growth versus the baseline scenario

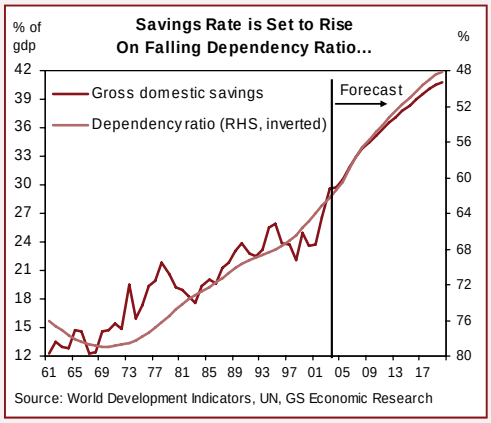


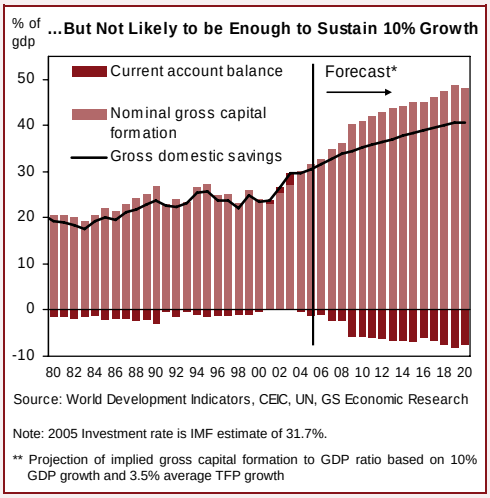
Source: Central Statistical Organisation of India, Goldman Sachs Economic Research.

What Will It Take to Reach 10% Growth? *(continued)*

Savings rates, however, tend to increase with falling dependency ratios, rising incomes and greater financial sector development. We have projected savings rates based on the evolution of dependency ratios. In India, according to our estimates, savings tend to increase about 0.8% for every 1% fall in dependency. We assume these rates for our projections.

For our more optimistic scenario, with productivity growth averaging 3.5%, the right-hand chart below shows the required investment/GDP ratio, the savings rate projections and the consequent current account deficit required to sustain a 10% rate of growth. We find that the current account deficit would have to be large and increasing, averaging 5.7% from 2006-2020. We believe such a large deficit would be difficult to sustain. Hence, India would need to increase public savings substantially to sustain a 10% rate of growth.





- It also encouraged a shift in employment from the less productive agricultural sector to more productive sectors.

India's trade/GDP ratio is still small, while average tariffs are still high by regional standards. India currently contributes less than 1% of world trade. Assuming that trade barriers continue to decline, productivity gains from further trade integration still has some distance to run.

Reason 2: The rise of the financial sector

Starting from a low base, the financial sector has grown rapidly in the past decade, and especially in the past four years, and has contributed to the jump in productivity. Credit to the private sector has grown by an average of 32% over the past two years. Increased financial intermediation improves resource allocation by effectively channeling savings into investment and raising productivity. India's financial sector is still relatively small compared with the size of its economy, as well as with those of its East Asian neighbours. Assuming that policies to open up the financial sector remain on track, including the entry of foreign banks starting from 2009, we expect financial deepening to continue and to contribute to increases in productivity in the medium term.

Reason 3: Back-office to the world

The success of the IT industry in India has had a material impact on productivity. Apart from the direct productivity gains of the major IT firms, it has had spillover benefits through two channels:

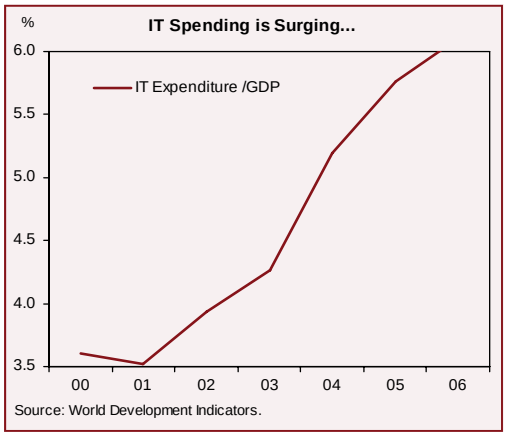
- It has provided powerful incentives for students to invest in IT skills. This has created a pool of technology-skilled labour that firms in other industries can tap into.
- It has had a demonstration effect on other domestic firms, leading them to ramp up their own technology spending, thereby boosting productivity.

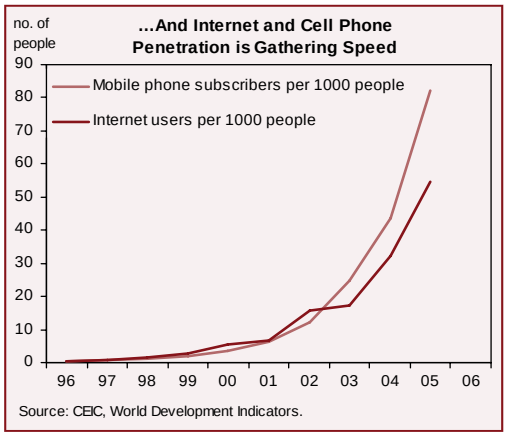
The rapid spread of mobile phones from a very low base provided a fillip to communications, further boosting productivity. Today, India is the fastest-growing market for mobile phones, with average growth rates of over 80% every year since 2000. India's technology spending is still low and there remains substantial scope for catch-up and productivity gains.

Reason 4: The Golden Quadrilateral

The Golden Quadrilateral Highway project is the first part of India's most ambitious infrastructure project since the building of the railway network by the British in the 19th century. In the last 50 years, the government has built just 334 miles of four-lane roads. The Golden Quadrilateral aims to build 3,625 miles of four- and six-lane highways. The highway will connect the four largest cities: Delhi in the north with Kolkata in the east, Chennai in the south and Mumbai in the west. Along the way it runs through 13 states and 17 other cities with a million or more inhabitants, and it is expected to be fully functional by 2007. The effort echoes the construction of a national highway system in the US in the 1920s and 1950s, which fuelled commerce and development.

We expect the new highways to help jump-start India's competitiveness, given that its dismal infrastructure has inhibited growth. They are expected to reduce travel times by half, lower fuel costs and freight delivery times and enable firms to leverage economies of scale. We expect the arteries to attract economic activity along the way. Already, hotels, petrol stations and shops are sprouting up along the highways. This will have implications for real estate, for location of industry and for decongestion of crowded cities. Areas close to urban centres stand to benefit most, as activity and people fan out of crowded cities along the highways.





More importantly, the highways will open up—and out—the closed worlds of India's villages. They will facilitate increased rural-urban migration, and when migrants return to their villages, they bring back new views and aspirations, encouraging others to follow in their footsteps.

The process is unlikely to be smooth or to happen overnight. Motorists could strike against taxes and tolls, speeding cars may have to contend with animals and bullock carts on the roads, local sensitivities to religious structures in the path of the highways may have to be taken into account, and there could be difficulties with the rural poor adapting to the highways. However, the potential for productivity gains and the boost to the economy are substantial.

Map of the Golden Quadilateral Highway – Connecting India

Reason 5: The great migration

The 21st century is set to become India's 'urban century', with more people living in cities and towns than in the countryside for the first time in its history. India has 10 of the 30 fastest-growing cities in the world and is witnessing rapid urbanisation. The growth is happening not in large cities, but in small and mid-sized towns. In 1991, India had 23 cities with a million or more people. A decade later, it had 35.

According to our projections, another 140mn rural dwellers will move to urban areas by 2020, while a massive 700mn people will have moved to urban areas by 2050. India's current urbanisation rate of 29% is still very low compared with 81% for South Korea, 67% for Malaysia and 43% for China. Rural-urban migration in India has the potential to accelerate to higher levels as, judging by the experiences of other countries, the pace of migration tends to accelerate after a critical level of 25%-30% urbanisation is reached, and due to faster economic growth.

Urbanisation is spurred by both push and pull factors. Deteriorating agricultural productivity, caste barriers and unemployment in villages push rural inhabitants out, while better opportunities in cities, very high growth in the construction industry and demonstration effects from other migrants pull rural workers into urban centres.

The implications for productivity growth are significant. Our estimates show that movement of labour across sectors, primarily from agriculture to manufacturing and services, adds 0.9ppt to

GDP growth a year. This process is likely to continue, if not accelerate, as urbanisation continues. Demand for urban housing and infrastructure such as electricity, health care, sanitation and education is set to jump several-fold. Policy will, however, need to address basic infrastructure shortfalls in order to take advantage of the 'urbanisation bonus'.

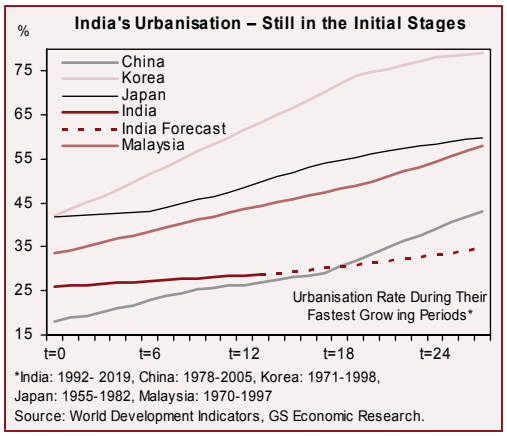
Reason 6: The land factor

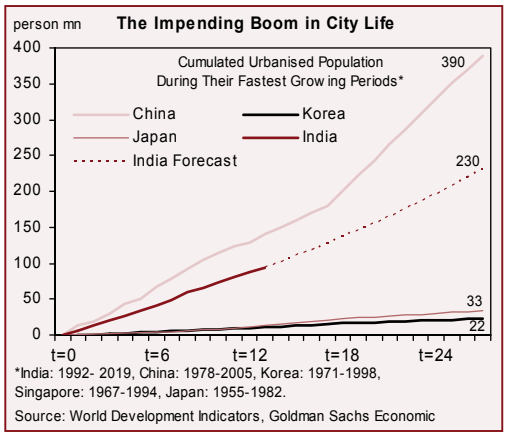
The imminent shift in land from agriculture to urban use and industry constitutes another source of potential productivity gain. Land is a critical input needed to keep the development process moving, allowing for the shift of people from the rural to the urban sector. Access to land is needed for factories and housing projects, and to create tens of millions of jobs in construction in the short run, as well as longer-term employment.

When land moves from low productivity agriculture to urban use and higher productivity sectors, overall productivity improves. However, India will need investments in agriculture to boost productivity, especially in rural connectivity, storage, etc., to improve the yield of remaining agricultural land.

The creation of new Special Economic Zones (SEZs) has the potential to transform the productivity of agricultural land. Ideally, India should develop economy-wide infrastructure and the necessary investment climate to enable the move from agriculture to industry and services. In the absence of governmental resources (or the ability) to do so, the SEZs will attract private-sector as well as foreign investment, thus helping to develop much-needed infrastructure, generate employment and facilitate urbanisation.

Productivity gains for the economy tend to be a cumulative process. Higher productivity leads to more confidence and increased openness, which means more technology and investment and sustained productivity growth. The building of highways will not only lower costs for companies but also enable rural-urban migration, the development of cities and the process of moving land from agriculture to industry and services. These in turn attract more investment through agglomeration effects, and thus sustain growth.





How Plausible Is Our Growth Scenario?

To check the plausibility of our projections, we compared India's growth projections with actual outcomes for its East Asian neighbours. High-growth phases during transition from low-income to middle-income are fairly common. For instance, Japan increased its output eightfold between 1955 and 1985, while Korea increased its GDP by nearly nine times between 1970 and 2000. More recently, China (starting from the same level as India in 1978) achieved a more than tenfold increase in its output in the 27 years to 2005. By contrast, India's growth transition, based on our projections of 8.4% growth from 2007 to 2020, do not appear implausible.

The investment rates that we envisage for India in our baseline scenario are well below the range achieved by other countries in East Asia. For instance, Korea sustained an average investment rate of over 35% for more than 30 years, while China has seen investment rates of roughly 43%. India's capital per worker is one of the lowest in the world, leaving considerable room to catch up.

Even in terms of educational attainment, India is not starting off on its growth transition at a considerable disadvantage to its East Asian neighbours. For instance, in terms of average years of schooling, the figure in India was 4.3 in 1992, compared with 4.6 for China in 1978, 4.7 for Singapore in 1967 and 5.3 for Korea in 1971.

Our assumptions on productivity growth rates seem reasonable when compared to other high-growth episodes. China has sustained TFP growth rates of 3.5% on average for 27 years over its high-growth phase. The low initial starting point for India implies greater scope for catch-up with other emerging and developed economies.

Another way to cross-check our projections is to ask whether the economy is close to its optimal level of productivity (also known as its production possibilities frontier), given its stage of development, its political, legal and economic institutions, and its geography. A previous study found that India's TFP level is between one-third and 40% of what it should be, creating the scope for productivity improvements based on just catching up.

The Growth Environment Score (GES) for India provides a different method of estimating the gains that India could attain. Based on the GES, the contribution to annual GDP growth could be as much as 2.8ppt. These independent analyses suggest the enormous scope for catch-up.

Where Do We See the Constraints to Growth?

Obviously, such a growth scenario is not without risks. India will need to make continued progress in reducing the fiscal deficit and in enhancing education at all levels. We also see threats to the growth process from protectionism, supply-side constraints to doing business and environmental degradation.

A rapidly-growing economy is often accompanied by an initial increase in income inequality (the famous Kuznets curve), which in India's case can manifest itself in a growing rural-versus-urban and an educated-versus-uneducated divide. With rising aspirations, it is critical for the economy to have 'inclusive' growth, with employment opportunities for all. Education

and labour market reform will be important in this respect. Otherwise, rapid growth could lead to rising social tensions, political pressure to slow the reform process and increasing protectionism from reservations in education and jobs. If managed badly, this has the potential to kill the growth goose.

Plenty of Room Ahead for Capital Deepening

(Capital stock in 2004, current prices)

	Capital Stock/ GDP (%)	Capital Stock per Capita (USD)
US	2.9	152,367
Japan	4.4	158,161
China	2.6	3,842
India	2.2	1,282

Source: Vikram and Dhareshwar (1993), CEIC, Central Statistical Organisation of India, GS Economic Research.

The old risk of sectarian disharmony is now supplemented with the new risk of political discontent spawned by dissatisfaction with the unequal distribution of economic growth. How effectively the political process manages these risks will be central to India's economic performance. Fortunately, thus far, there is a wide consensus among political parties in India to enhance the reform process. However, there are considerable risks that India will not be able to achieve 'inclusive growth' without sacrificing average growth rates. The most direct manifestation of this risk is costs to the public sector of 'populist' policies, which reduce public savings and the ability to finance the required investment growth.

India will need to alleviate supply-side constraints in order to absorb the labour coming out of agriculture and to sustain the growth momentum we have outlined. It currently takes 35 days to start a business, 270 days to obtain various licences and permits, 62 days to register a property, nearly four years to enforce contracts, and a shocking 10 years to close a business. It is also extremely difficult to lay off workers in India, and on average it costs more than one year's wage.

Even though India is making progress in reducing red tape, the scale of the problem remains immense. Action on these issues is important because it is the small and medium-sized enterprises that create the most jobs.

To embark upon its growth story, India will have to educate its children and its young people (especially its women), and it must do so in a hurry. Lack of education can be a critical constraint to the growth of the knowledge-based IT sector, as well as in the move to mass employment in manufacturing. The demographic dividend may not materialise if India fails to educate its people.

The success of India's elite students from the IITs and IIMs masks the generally abysmal state of higher education in India. Higher education remains heavily regulated, with little to encourage private-sector participation or innovation. There are, however, changes taking place. Labour market returns to education have risen in recent years, leading to an increase in demand for better quality, and as a result the private sector is beginning to step in to fill the supply gap.

We believe that environmental degradation is a critical risk to India's long-term growth potential. The country remains largely rural, and normal monsoons are the life-blood of the system. With increased urbanisation, industrial development and a burgeoning need for energy, India will be a large contributor to global warming. Climate change can cause erratic monsoons, with grave implications for rural incomes and overall growth. Already, shortages in

India's Growth Environment

The Goldman Sachs Growth Environment Score (GES) allows us to compare India with its peers at comparable income levels, and provides a perspective on where the greatest scope for improvement lies. India's macro environment and political conditions are generally conducive to growth. The key drawbacks are the high fiscal deficit, low penetration of PCs, phones and Internet, and especially low education levels. India could improve its growth potential by an annual 2.8ppt by moving to the best in its class of low-income countries.

How India Rates in the GES

Macroeconomic stability

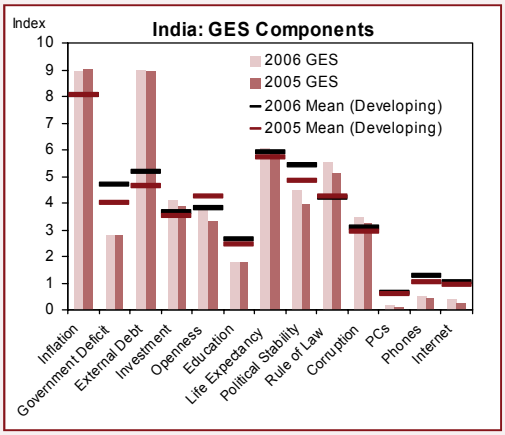
- **Inflation:** Historically, inflation has been relatively well-contained due to a strong commitment by the central bank and the Ministry of Finance. Commodity and food prices have risen in recent months, but inflationary expectations have been well managed, thanks to the credibility of the central bank.

- **Government deficit:** The consolidated fiscal deficits of the centre and states are high both in absolute terms and relative to India's developing country peers. However, with the current growth momentum and consequent buoyancy in revenues, we expect an improvement in macro-fiscal stability, given the implementation of the Value-Added Tax (VAT) and the government's commitment to the Fiscal Responsibility Act, which envisages an annual reduction in the fiscal deficit by 0.3%. Although it still needs to fall further, the general government deficit has come down from 10.1% in FY2001 to an estimated 6.3% of GDP in FY2006, with both central and state finances showing a marked improvement. However, to boost investment substantially, further improvement in the consolidated deficit will be necessary.

- **External debt:** At 17% of GDP, India's external debt is low. This means that external and currency risks are manageable.

Macroeconomic conditions

- **Investment:** Although India's investment/GDP ratio is not high by regional standards, gross capital formation has risen in recent years and the outlook for investment growth is strong, especially in areas such as infrastructure and retail. However, bureaucratic red tape remains a bugbear for the investment climate.



India's Growth Environment *(continued)*

- **Openness:** Tariffs have gradually been reduced, and India is negotiating a clutch of free-trade agreements. We expect openness and trade to improve, with positive consequences for productivity growth.

Human capital

- **Education:** India compares very unfavourably with its peers in indicators of educational attainment at all levels. In 2000, the working-age population's average number of years of schooling was about 5.1 in India, compared with 6.4 in China and 6.8 in Malaysia. Both the spending and the efficiency of spending on education remain weak. The shortfall in education is a key constraint to growth.

- **Life expectancy:** Life expectancy is comparable to that in other developing countries and on the rise due to increases in income, health care and nutrition. Fiscal spending on health care remains inadequate, however, with large sections of the population lacking any access to health care.

Political conditions

- **Political stability:** Democracy and democratic values are relatively well-entrenched, and the political system is largely stable. Handover of power after general elections held every five years is peaceful, and confidence in the stability of the system is high. However, there are incipient threats to stability from the extreme left-wing Naxalite movement, which need to be monitored closely.

- **Rule of law:** India ranks above its peers in rule of law due to a relatively well-functioning judiciary. However, cases drag on for years, and further improvements in the legal process are necessary to improve the business climate.

- **Corruption:** Although India scores better than the developing country mean, bureaucratic and administrative corruption and rent-seeking by the large public sector continue to dampen investor confidence.

Technological capabilities

- **PCs/Phones/Internet:** India is starting from a very low base in technological capabilities, and it ranks well below the developing country average. However, connectivity and PC penetration is expanding rapidly. India is the world's fastest-growing market for mobile phones, now adding some 20mn subscriptions a year.

water are occurring with concerning rapidity. If water and electricity are not priced at close to long-run marginal social cost, the shortages will become critical. In order not to hamper the growth process, India will need to put in place policies that are increasingly environmentally-friendly.

Although these risks are important, we would need to see a dramatic deterioration in them to fundamentally derail the growth process. Comfort can be derived from the fact that India's growth experience in the past two decades has been achieved with low volatility. More recently, strong economic performance has been achieved during a period of rising oil prices and with the economy remaining relatively closed. A high level of reserves, a falling fiscal deficit, low external debt and a low current account deficit give further reassurance about the underlying strength of the current growth momentum.

Our projections of India's potential growth are based on growth-friendly policies continuing to be implemented. We would emphasise the 'FORCE' factors policies as critical to sustaining growth, in particular, policies to enhance Financial sector growth, Openness to trade, Rural-urban migration, Capital formation, Education and Environment.

Conclusion: India Can Become a Motor for the Global Economy

Any kind of long-term projection is subject to a great deal of uncertainty, and we need to be mindful that India's growth transition is unlikely to be smooth or devoid of shocks. International development experiences are littered with examples of failure due to bad policies or simply bad luck. However, our projections provide a framework based on clear assumptions that can help investors to assess future developments and to position themselves to take advantage of emerging opportunities.

In absolute terms India will remain a low-income country for several decades, with per capita incomes well below its BRIC peers. But if it can fulfil its growth potential, it can become a motor for the world economy and a key contributor to generating spending growth.

India's imminent urbanisation process has implications for demand for housing, urban infrastructure, location of retail and demand for consumer durables. We expect the coming on-stream of major highways (especially the Golden Quadrilateral) to drive growth in the transportation sector, spur demand for vehicles, increase real estate values along the corridor and potentially boost construction of suburban homes as people escape congested cities. The SEZs hold out substantial investment opportunities in all spheres of activity.

Our projections are for India's potential output, i.e., growth rates that are possible under particular conditions—rather than a central case of what will happen. There can, of course, be a big gulf between potential and reality. Given the considerable implications, India's ability to turn potential into reality should be of pressing importance not only for the fate of its 1.1bn citizens, but also for the progress of the global economy.

Tushar Poddar and Eva Yi
January 22, 2007