India has come a long way in its economic and social development, but stands at an important crossroad. Though blessed with the necessary DNA of a superpower-in-the-making, there are many hurdles it must overcome along the way in order to fully realize its incredible potential.

Introduction

In 1991, Mr. Manmohan Singh, then India’s finance minister and armed with a swathe of innovative economic reforms, confidently predicted India’s emergence as a major economic power at a time when the country was facing a crushing balance of payments crisis. What seemed an unfathomable dream to many has become a reality. India’s economy has almost quadrupled in size over the past two decades, growing on average 7% per year, and by over 9% between 2005 and 2007. The nation joined the coveted trillion dollar GDP club in 2007 and is expected to reach a GDP level of US $3.4 trillion by 2016. Many economists predict that India’s growth will outpace that of China over the next three to five years\(^1\).

While India’s recent economic expansion is indeed extraordinary, its long term growth story is potentially far greater. While investors will do well to take advantage of existing as well as latent opportunities in India as they ripen over the next two decades, they should also be mindful of the growing pains that almost inevitably accompany such rapid growth. We therefore believe that a deep appreciation of India’s multi-dimensional prospects and key obstacles to growth is vital in order to benefit most from the opportunities that will emerge over the coming decades.

The chief aim of this white paper is to provide a summary assessment of India’s extraordinary growth story and to address the challenges that lie ahead. We also examine the reforms that we believe need to be addressed if the country is to fully realize its incredible potential.

After offering a brief overview of the history and impetus behind India’s growth, the analysis focuses on the two building blocks that we believe are necessary for long term economic success in the country: human capital, of which India has an abundance, and infrastructure, which is woefully lacking. This imbalance of excess and shortage triggers a host of obstacles and opportunities, and India’s key challenge is to hone and harness these two building blocks to sustain growth. This can be achieved through large-scale rural development and urbanization, and by the government clearing the way for effective reforms that allow the country to more efficiently utilize its prospering private sector expertise and technology.

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1 The Economist, 21 July 2011.

This material must be read in conjunction with the disclosure statement.
initiated in 1991 during the balance of payments crisis were instrumental in transforming the country’s economy. The main objective of the reforms was to modernize India’s economic structure in order to achieve higher growth and steer the country’s liberalization process towards deregulation, privatization and international trade and investment. Over the years, these reforms have been made all the more effective because they have been embraced and upheld consistently by every successive government since.

India’s growth trajectory shifted higher in the first decade of the new millennium. During this period, real GDP growth averaged 7.3%, catapulting the Indian economy to the status of the second fastest growing economy among the G-20 members\(^2\). The strengthening of economic activity in recent years has been supported by a sustained increase in the gross domestic investment rates from 23% of GDP in 2001-02 to 35% in 2010-11, with over 95% of the investment during this period financed through domestic savings\(^3\).

**Resilient India**

An important characteristic of the growth phase over the past three decades has been the country’s resilience to external shocks. During this period, India has withstood only one serious balance of payments crisis, triggered largely by the Gulf war in the early 1990s. The Indian economy, in the latter years, relatively successfully managed to avoid any adverse contagion effects from the East Asian crisis of 1997, the Russian crisis of 1997-98, the sanctions following the Pokhran incident in 1998, the border conflict with Pakistan between May and June 1999 and the 2007-8 financial crisis. Viewed in this context, this robust macroeconomic performance demonstrates the vibrancy and resilience of the Indian economy.

In summary, India’s high growth has been supported by the following key factors: industry deregulation and trade liberalization, structural transformation of the economy, and high domestic savings and investment rates.
INVESTABLE INDIA
FIVE PILLARS OF GROWTH

1. Internally-Driven Growth
Since India’s economy is internally driven, it tends to be more resilient to external shocks, such as the financial crisis of 2007/8. When most economies were struggling to grow, the Indian economy was one of the fastest growing in the world. This attribute can provide a portfolio diversification element.

2. Net Importer
India is a contra play on global growth. As opposed to other emerging markets, India is a net importer. In times of crisis when external trade is sluggish (exports and imports), India benefits because the cost of its imports typically falls at a faster pace than that of its exports. India imports large quantities of commodities, including crude oil where a global slowdown forces prices downward.

3. Intellectual Capital-Based Exports
Unlike most other emerging markets that predominantly export commodities to the world, India exports technology, IT services, pharmaceutical products and hi-tech engineering goods, which are all intensive in intellectual capital. This adds to its resilience to external factors because its exports are less affected by the ebbs and flows of global prices. Exports are expected to be doubled from US $203 billion in 2007/8 to around US $400 billion in 2011/12, according to latest figures from India’s Economic Advisory Council.

4. Largest Democracy in the World
India prescribes to the “Rule of Law”, rather than authoritarianism, and therefore holds itself accountable to its citizens. India has a federal constitution, dividing powers between the central government (union government) and state governments, which have their own legislative assemblies and statutory bureaucracies.

5. Well-Established Stock Market
India has extensive experience in stock markets and public ownership of corporations, unlike other emerging markets. The oldest stock exchange in Asia, the Bombay Stock exchange, was established in 1875 and has approximately 5,000 listed companies and offers T+2 settlement cycles and complete dematerialization of shares with around US $1.2 trillion in market cap⁴.

Growing Pains On The Way To Sustainable Growth

While India’s economic growth over the past few decades has indeed been impressive, we believe that there are several key challenges that lie ahead if the country is to succeed in maintaining momentum. If these challenges are addressed and can be overcome, some believe that India could unlock double-digit growth in the years ahead.

One significant aspect of India’s economic expansion so far is that the fruits of growth have not reached the rural sections of the population to the extent seen in countries such as China and South Korea. Such non-inclusive growth can threaten its continued economic prosperity and even its political stability in the long run if it is not addressed. Therefore, one of India’s key challenges is to develop its massive rural population and equip it with the resources not only to improve the country’s poor agricultural yields, but also to facilitate a transition into high-growth non-agrarian sectors. For this to work, cities must have in place the necessary employment opportunities and infrastructure able to cope with their rapidly expanding populations.

Fortunately, urbanization and rural development are not mutually exclusive activities. A proactive approach to both, coupled with effective social reforms, should spur the necessary infrastructure development to better harness human capital in both rural and urban areas.

India’s Demographic Advantage

India is home to a population of nearly 1.2 billion. It is not only the second most populous country in the world, but also one characterized by its relative youth and a declining dependency ratio that could pay lucrative demographic dividends. According to the 2011 census, almost 57% of India’s total population is between the ages of 15 and 59, with only 7.5% aged over 60 years. These favorable demographics are forecasted to continue for several decades. With the emergence of skills and knowledge as new engines of economic growth, higher population growth may be seen as more of an opportunity than a constraint. This positions India’s workforce in a dominant position as China grapples with a declining pool of workers and an aging population. See Figure 2.

Even if a country can match India’s low labor costs, it cannot match the sheer size of its workforce. As China’s workforce shrinks by 40 million over the next two decades, India will add around 220 million workers over the same

⁴ www.bseindia.com, September 2011.
are the product of an outdated, heavily bureaucratic public education system. This system has created a situation in which there is a chronic shortage of appropriately skilled workers in India's growth-driving industries.

For example, the booming service sector increased its contribution to total GDP from 45% to 55% between 1991 and 2009. In contrast, the contribution from agriculture declined from 30% to 17% over the same period, despite continuing to provide employment and livelihoods to 55% of the total workforce. The impact that this disparity in productivity between agricultural and non-agricultural sectors has had on livelihood and inequality in the economy can be seen in Figure 4 below, which shows the absolute and relative levels of average labour productivity across three sectors: agriculture, industry and services. Although these are very crude measures of productivity differentials, the chart would appear to suggest that the average worker in the manufacturing or service industry is about five times as productive as the average worker in agriculture, and therefore contributes five times as much to total GDP, as well as spending and saving more out of higher earnings.

Unfortunately, many existing educational and employment reforms do not yet adequately address these fundamental labor inefficiencies and even have unintended consequences. For example:

- The Indian government has improved gross school enrollment ratios and decreased dropout rates by implementing a raft of programs and legislative actions. Indeed, the number of schoolchildren between the ages of 5-14 attending school has risen from 82.4% in 2004-5 to 89.3% in 2009-10, with an even greater improvement for girls.

Confronting The Skills Mismatch

India’s abundance of labor is potentially a key growth generator but only if India can attract workers into high growth sectors and equip them with the right skills through its education system.

Despite a quarter of its population being illiterate and with a poor school enrollment rate for children, India churns out an eye popping number of graduates each year. However, 75% of technical graduates and 85% of general graduates are not deemed fit to be hired into high growth sectors, such as IT and call centers, largely because they

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5 Wall Street Journal, 5 April 2011.
6 Wall Street Journal, 30 March 2011.
7 www.planningcommission.nic.in, October 2011.
Asian economies, but it also fails to properly address the quality of education once the child makes it to school. Increased attendance without commensurate improvements to the existing framework is likely to be counterproductive.

- The government has spent billions of dollars over the past two decades trying to uplift its poor. However, its extensive and inefficient welfare system does not appear to be reducing malnutrition rates. Grain stocks intended for the poor often ultimately end up being siphoned into private markets.

- The US $9 billion Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA) aims to provide the rural population with jobs by funding infrastructure projects in their own villages. While the idea is brilliant, the program itself is riddled with corruption and its ban on mechanization (in an attempt to create jobs for unskilled workers) actually traps the local population in a vicious cycle of government handouts without allowing them to develop any transferable skills.

**Immense Potential At Its Fingertips**

India’s ability to capitalize on its working population will determine its long term attractiveness to investors. Instead of fighting various symptoms, we believe that the root of the problem may be addressed by:

a. improving the quality of the public education system in terms of both curriculum and teachers in order to produce skilled workers

b. making it easier for workers to transition to growth sectors

c. creating new job opportunities in well planned urban centers

d. utilizing technology to circumvent corruption and infuse efficiency into current urban and rural initiatives

e. tapping into the expertise of the innovative and unflagging entrepreneurial class

As with any rapidly developing economy, India’s growth boom has put many of its shortcomings sharply into focus. Many Indians have not benefited a great deal personally from the nation’s economic growth, but have nevertheless been witness to it. Consequently, they have been awakened not only to their own potential but that of their country. In the past, human aspiration was muted by the grind of daily survival, but today an energetic young population is able to see through to the possibilities that the new India can provide. The government is also keenly aware that in order to achieve wide participation in the nation’s economic growth and development it needs to share the benefits on a much more egalitarian basis. Further, this wider participation in economic expansion will enhance India’s ability to sustain growth by broadening consumer markets, improving production and exports and strengthening its democratic foundations. But this brings with it a massive funding burden. Thankfully, both the government and the private sector appear committed to sharing the costs, understanding that there is little alternative.

The driving force behind the effort to tackle the root of India’s human capital problem is a Five Year Plan: a schedule of proposed investments developed, executed and monitored by the Planning Commission of the Government of India.

Although Five Year Plans in India are nothing new (the first was published in 1951), the 12th Five Year Plan, covering 2012 to 2017, seeks to revamp reforms and initiatives set out in prior plans and plug ongoing inefficiencies. For example, a rural initiative had included the provision of toilets in an attempt to improve health and hygiene, only for them to lay unused due to a lack of water supply. Another initiative sought to increase school attendance rates but did not instigate a corresponding increase in classrooms. Only time will tell whether the 12th Plan will be deemed a success, but the apparent will for effective change is in itself cause for hope; the prerequisites for successful execution have at least been firmly spelled out in India’s planning documents.

Rapid growth has also triggered some fundamental and significant shifts in thinking and fresh new approaches to tackling various issues. For example, on the educational front India has finally accepted that the current focus on reading, writing and arithmetic (the so-called 3Rs) needs to be supplemented with the 4Cs (communication, collaboration, creativity, critical thinking). This is expected to result in a better quality of education that can better address the job marketplace’s needs, rather than merely increasing attendance. Since the shortage of the right kind of talent is now felt more acutely than ever, skill development is also at the forefront of initiatives. There appears to be a sense of urgency to create superior educational facilities to retain and cultivate new talent. In addition, a concerted effort is being made to initiate vocational programs to convert existing unskilled or uneducated workers into specialized workers. India’s new urgency and desire for change should provide some impetus for the country to better harness its true human capital potential.
Finally, another vital resource at India’s disposal is its talented and innovative pool of entrepreneurs, a group of business owners and CEOs who lead some of India’s most successful enterprises. These individuals are highly praiseworthy for their contributions to growth, persevering spirit and ability to thrive through even the most adverse conditions. The synergy between the government’s resources and the talent of these individuals could produce a pragmatic framework for truly advancing the country’s economic prospects. For example, the government has created a start-up and acquired the services of the entrepreneurial CEO of Infosys to lead an ambitious project to digitize its 1.2 billion citizens and their records on a voluntary basis. Projects like these could leap-frog India from an environment marked by corruption, inefficiency and waste and seamlessly provide the benefits and services needed to mobilize its working population as well as its enterprises.

Effective social reforms coupled with an increasing focus on efficient urban and rural planning will help create jobs and improve overall productivity, leading to higher tax revenues that will aid in India’s transformation into a modern economy. If India can successfully nurture its thriving cities, this would allow India to capitalize on its comparative demographic advantages rather than be suffocated by them.

The Infrastructure Roadblock

As abundant as India is in human capital, it is woefully deficient in adequate infrastructure. For decades, following its independence, India paid scant attention to this key building block of economic growth and prosperity. The pain associated with an inadequate or non-existent infrastructure framework is shared in both rural and urban areas. Seeking to benefit from the Indian growth miracle, the rural population is pouring into the cities in search of a better life. Unfortunately, even the most thriving cities’ infrastructure cannot handle such a large inflow. As such, people are met with crushing poverty and inadequate services. For example, only 63% of urban citizens have access to sewage facilities, receive just one-third of the recommended amount of portable water and have to cope with abysmal housing, transportation and medical care8. The situation is even worse in rural areas.

The lack of infrastructure in both urban and rural areas is not just a burden on the citizens but also on sectors critical for growth:

- The manufacturing sector is negatively impacted by inadequate power and transport facilities since it relies heavily on infrastructure. Any increase in cost due to unreliability reduces its competitiveness both domestically and globally. For this reason, manufacturing’s share of GDP has stagnated in India, whereas manufacturing has served as a core growth engine for other Southeast Asian countries.

- India’s northern and western regions have relatively high growth compared to the nation overall. However, a shortage of power is causing an increasing drag on this growth, leading many to resort to pricier alternatives in the form of captive power, such as petroleum, the increased demand for which has both fiscal and balance of payments consequences. Recently, the International Energy Agency stated that India needs 245 additional electricity grids to achieve universal electrification, while China only needs two.

- India has the second largest road network in the world, totaling 4.2 million kilometers, but most of it is in a poor condition; half of the network is not even paved and highways account for only 2%. A robust transportation system is essential for an efficient supply chain that can meet the voracious internal demand. Right now, there is barely a functional agricultural chain that can bring rural products to urban areas. Also, good transportation could slash congestion and waste in half and reduce the fuel requirement by approximately 15-20%9.

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8 Planning Commission of India, August 2011.
9 Planning Commission of India, August 2011.
Compared with other emerging markets globally, India’s productivity gap continues to be a significant impediment to economic development. To raise productivity levels, higher investments in infrastructure are critical.

**Bulking Up On Infrastructure Spending**

The Planning Commission’s 11th Plan emphasized the importance of investment in infrastructure on achieving sustainable GDP growth of 9 to 10% over the next decade. In this context, it envisaged an increase in investment in physical infrastructure from the 5% of GDP that was seen in the 10th Plan to about 9% of GDP by 2011-12 (final year of the 11th Plan). This was estimated to require an investment of US $514 billion during the period of the 11th Plan compared to an estimated investment of US $218 billion for the 10th Plan.

In August 2011, the Planning Commission submitted its latest ‘draft approach paper’ for a 12th Plan covering the years 2012 to 2017, within which it underlined the government’s appreciation of the critical nature of its infrastructure deficiencies and its willingness to commit substantial monies to solve the problem. See **Figure 5**.

Although the infrastructure investment needed for this latest plan is estimated to be around US $1 trillion, this scale of requirements needs to be seen in the context of India’s GDP of US $1.7 trillion in 2010-11 and the total outstanding credit in the Indian banking system of over US $0.7 trillion. In this respect, there is no dire need for foreign capital inflows to build infrastructure in India. The nation saves around 32-34% of its GDP annually, the equivalent of around US $600 billion, so India theoretically has enough from internal financing to fund its infrastructure investment requirements. Nevertheless, the government has undertaken many initiatives to attract foreign direct investment (FDI) and the international expertise that investment would bring. India could draw even more FDI by removing FDI caps, developing efficient markets and creating a stable policy framework. This combination of government encouragement, private sector participation, foreign investment and expertise and effective reforms should be enough to enable India to realize its ambitious infrastructure building program.

The investment required to achieve the 9-10% growth proposed in the 12th Plan calls for acceleration of the levels already achieved. The investment rate (which equals gross domestic capital formation adjusted for errors and omissions as a percentage of GDP) is estimated to have increased to 36.4% of GDP in the 11th Plan from 31.8% in the 10th Plan. While there are specific sectorial bottlenecks that explain some of the inflationary pressures at the aggregate level, resolving these bottlenecks requires additional investment in the creation of infrastructure. Hence, in order to sustain high rates of growth while maintaining moderate inflation, the investment rate has to be higher than in the past, especially in areas where supply side bottlenecks due to lack of proper infrastructure could trigger inflation. Thus, the average investment rate needed during the 12th Plan period is estimated to be 38.7% of GDP in order to achieve 9% growth and with 4.5–5% average inflation. The savings needed to finance this level of investment are expected to derive from improvements in the savings rate of households, private corporations and the public sector.

India certainly has the willingness and the wherewithal to successfully execute its latest schedule of plans, and also has the advantage of hindsight both from its own past experiences and from the lessons of other developing countries. Efficient execution is key and dependent upon:

1. implementing numerous reforms ranging from land laws to tariffs to project governance
2. creating incentives to encourage the private sector, including foreign investors, to embrace and participate in projects

**FIGURE 5** Sectoral Break-up Of Projected Investment: 12th Plan At 2006-07 Prices

<table>
<thead>
<tr>
<th>Sector</th>
<th>XI Plan (2007-12)</th>
<th>XII Plan (2012-17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity (incl. NCE)</td>
<td>165</td>
<td>322</td>
</tr>
<tr>
<td>Roads and Bridges</td>
<td>70</td>
<td>125</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>86</td>
<td>274</td>
</tr>
<tr>
<td>Railways (incl. MRTS)</td>
<td>50</td>
<td>80</td>
</tr>
<tr>
<td>Irrigation (incl. Watershed)</td>
<td>62</td>
<td>97</td>
</tr>
<tr>
<td>Water Supply &amp; Sanitation</td>
<td>28</td>
<td>43</td>
</tr>
<tr>
<td>Ports</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Airports</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Storage</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Oil &amp; Gas Pipelines</td>
<td>32</td>
<td>65</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>514</strong></td>
<td><strong>1046</strong></td>
</tr>
</tbody>
</table>

Source: Planning Commission of India.

If executed properly, India’s 12th Plan could turn out to be one of the most effective mass-scale economic transformations ever undertaken, and will serve to put India squarely on the road to realizing its potential as a first rank, 21st century global economic power.

Vital Role Of The Private Sector

Within the 12th Plan, 50% of the capital will need to be derived from the private sector, versus 30% in the current 11th Plan. This is in part based on financial necessity, but also represents, perhaps, an acknowledgement that the Plan cannot be successfully executed without full private sector involvement and expertise, and that the days of complete reliance on government for such initiatives are over. Clearly, this will be a public/private partnership of immense complexity and one that will require the government to properly incentivize private investors. See Figure 6 and Figure 7.

In pursuit of its commitment towards improving the level and quality of economic and social infrastructure services across the country, the government envisages a substantial role for Public Private Partnerships (PPPs) as a means for harnessing private sector investment and operational efficiencies in the provision of public assets and services.

The government has set up a so-called Public Private Partnership Appraisal Committee to streamline the appraisal and approval of projects. In addition, there are now standardized documents, such as model concession agreements and bidding documents, which accelerate decision-making among all parties involved and provide a fair, transparent and competitive process.

Over the years an elaborate eco-system for PPPs has developed, involving institutions, developers, financiers, equity providers, policies and procedures. To provide a broader cross-sectoral fillip to PPPs, extensive support has been extended through project development funds, Viability Gap Funding, user charge reforms, the provision of long tenor financing and refinancing as well as institutional and individual capacity-building. PPPs are now seen as the preferred execution method in many sectors such as highways, ports and airports. The goal is to apply the PPP financing structure into other sectors from sanitation to education, in order jump start progress on India’s overall development goals.

Debt Financing

As well as PPPs, infrastructure capital also needs to be raised through long term debt financing, although insurance and pension funds have generally preferred to stay away. In order to facilitate financing arrangements, and stimulate and deepen the domestic bond market, the finance ministry has announced guidelines for establishing infrastructure debt funds and introduced tax-free infrastructure bonds. It has also taken steps in the right direction to liberalize the External Commercial Borrowings window. Also, a Viability Gap Fund is available for up to 20% of capital costs based on competitive bidding. So far, 270 central and state projects with an investment of US $54 billion have been awarded with US $15 billion of Viability Gap Funding. In addition, the India Infrastructure Finance Company provides longer term
It should be noted that a deteriorating global economy could produce headwinds for India’s current economic plan. Ironically, the economic development plan whose intent is to foster sustained GDP growth is dependent on strong GDP growth to fund the programs.

Thankfully, India is a resilient nation: its growth is strongly internally driven and it is a net importer, which should help shield it from any continued global slowdown or a protracted financial crisis. The economy has shown an uncanny ability to weather difficult circumstances, such as the recent high inflation and rising interest rates. Furthermore, India’s huge and growing population is relatively youthful and provides a level of domestic consumer demand that is virtually unmatched. It is also supported by an innovative private sector and access to technology that can facilitate radical progress.

Crucially, the latest plans for infrastructure development built into the 12th Plan demonstrate that the government is seriously committed to maximizing its potential, and also understands the level of resourcing, reforms and other measures that growth will require. Growing pains are essential to strong and healthy development, and India appears now to be more prepared than ever to do what it takes to realize its incredible potential.

Other challenges range from the need for stronger governance to a solid land acquisition framework and a speedy approvals process, all of which are essential to executing the infrastructure projects. The government is taking steps to address these various issues, such as improving accountability and attempting to pass a revised land acquisition bill, to name a few.

At this stage, there are definite glimpses of “success” in India today. At a state level, Gujarat has provided what others pray for in India: less onerous labor laws, passable roads, reliable electricity and effective bureaucracy. They are reaping the benefits by experiencing double-digit growth, a rate much higher than the national average. On a city level, Mumbai’s key success is BEST, an autonomous agency within the Municipal Corporation of Greater Mumbai, responsible for public bus transportation and electricity. It has operational autonomy, a board that allows for quick decision-making and clear accounting of revenue and expenses. Now the government needs to play a very active role in replicating these pockets of success nation-wide.

Conclusion

As we have seen, India has made extraordinary progress in its economic development over the last few decades. However, the country faces many challenges over the next several years if it is to realize its dream of becoming a leading global superpower. The cooperative actions of the government and private sector in lifting a majority of its population out of poverty and illiteracy, closing the skills gap, creating gainful employment and building the infrastructure framework, will determine the extent to which India can realize its full potential. If it can overcome these difficulties along the way, the rewards for the country and its people – as well as anyone else with a vested interest in its success – are too big to ignore.

13 National Informatics Centre, June 2011.
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