

India: Asia's Next Productivity Success Story

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ABSTRACT

India has created the basic rules of modern economic and political life. While the country's institutional framework needs strengthening, it will allow India to prosper without drastic changes. Gradual economic reform has transformed India, putting it on a much faster growth path. Economic growth in the next ten years may not equal China's current double-digit growth rate, but India is nevertheless very likely to become one of the fastest growing economies in the world, growing at a pace similar to that of Malaysia, Thailand, Taiwan and Korea during their period of sustained rapid economic growth. The recent acceleration in real GDP growth reflects both faster input growth as well as rising total factor productivity. However, India has weaker social pillars to support economic growth than other East Asian countries had at the time of their miracle growth years, mainly due to its poor education system. Failure to address shortcomings in education, along with inadequate physical infrastructure, and large fiscal deficits, would constrain India from reaching even faster growth.

THIS ARTICLE REVIEWS RECENT TRENDS in Indian output and total factor productivity growth, looking at productivity data at the aggregate level and in various sectors of the economy. The article first highlights the importance of a rising savings rate and greater use of capital inputs for growth in recent years. It then examines the factors likely to drive future output and productivity growth. The third section looks at obstacles to faster growth, focusing on shortcomings that have contributed to a relatively small industrial sector in India, compared with other Asian countries. The article concludes that India's emerging policy framework appears to be favorable for both higher factor accumulation and total factor

productivity growth in coming years, thanks to economic reform that has generated better incentives for investment and growth.

Recent Trends in the Indian Economy

Output and GDP per capita growth

India is a poor country that is rapidly becoming wealthier. Based on purchasing power parity exchange rates, India's per capita income was only US \$3,120 in 2004, ranking it 144th in the global income scale. However, the Indian economy has enjoyed rising growth in recent decades, with real GDP growth climbing from an average of nearly 6 per cent per year during

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the 1990s to nearly 7 per cent in 2000-2006 (Table 1). In 2003-2006, it averaged 8.3 per cent per year.

The growth numbers become more vivid if expressed in a different way. From the early 1950s to the early 1980s, India grew at an average annual rate of 3.5 per cent or 1.2 per cent on a per capita basis (Chart 1). At that pace, per capita income doubles only every 57 years. Per capita income has been rising 6.6 per cent annually in the last three years, resulting in a doubling in just less than 11 years. Rising income has helped cut poverty significantly, from 36 per cent in 1993-94 to the current rate of around 20 per cent.²

Is India destined to be Asia's next economic miracle? Increasingly, the answer appears to be "Yes". India may not grow as fast as China, which has grown at an average annual rate of 9.5 per cent over the last 20 years. However, India is very likely to remain one of the fastest growing economies in the world in the coming decade, growing at a pace similar to that experienced by Malaysia, Thailand, Taiwan and Korea during their period of sustained high economic growth (Table 1).³

India's GDP growth rate has trended upwards in recent years and growth has become less volatile. The coefficient of variation for annual GDP growth fell to 0.3 in 1991-2005, from 0.4 in 1981-90 and 1.0 in 1951-80 (Purfield and Schiff, 2006:Chapter 10). The service sector has led GDP growth, contributing to more than half the total growth in the economy since the 1990s and helping to lessen the country's economic dependence on the monsoon.

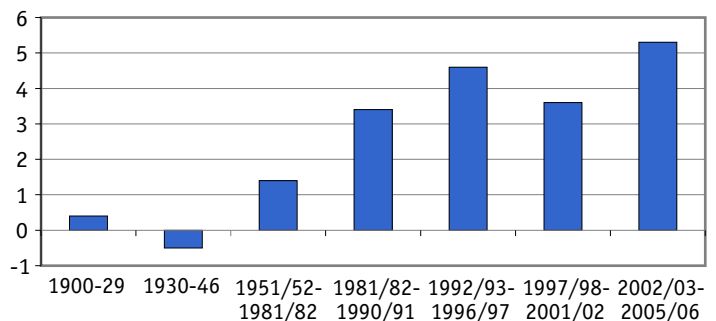
Table 1
Real GDP Growth in Asian Countries
During Peak Growth Periods
(average annual per cent change)

India (1990-2000)	5.7
India (2000-2006)	6.9
China (1994-2004)*	9.7-10.4
Hong Kong (1960-1995)	7.7
Korea (1960-1995)	8.1
Singapore (1960-1995)	8.4
Taiwan (1960-1995)	8.6
Thailand (1960-1995)	7.5
Malaysia (1960-1995)	6.9
Japan (1950-1980)	8.0

* The range reflects incomplete national income data in China following a statistical revision done in early 2006.

Source: Anderson (2005) using data from CEIC and the World Bank.

Chart 1
Per Capita GDP Growth in India
(per cent)



Source: Acharya *et al.* (2006).

Growth in India has been driven by the domestic economy, in contrast with the export-led growth that has characterized many East Asian countries. India typically runs a trade deficit and receives foreign direct investment (FDI)

2 The official poverty rate fell to 22 per cent of the population in 2004-05 according to the government of India's National Sample Survey Organization. Indian growth and other data are typically reported by the government using the fiscal year ending on March 31st.

3 The acceleration in Indian growth is consistent with data from the Groningen Growth and Development Centre (<http://www.ggd.net/index-dseries.html#top>). Such data show that GDP per person employed (using 1990 dollars adjusted for purchasing power parity) increased only 32 per cent cumulatively during 1980-90 but rose 49 per cent during 1990-2000. The increase for 2000-2006 was 36 per cent, indicating that the total figure for the period 2000-2010 is most likely to exceed that of the previous decade.

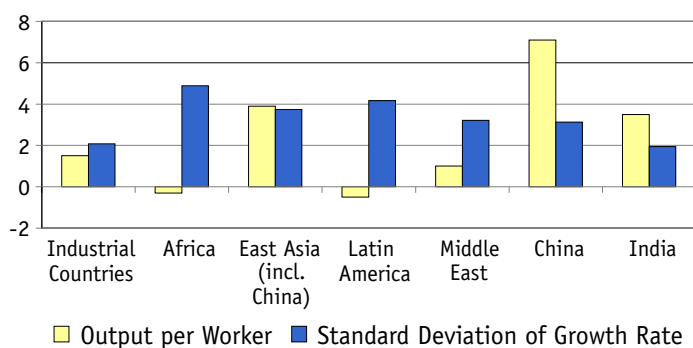
Table 2
Contribution of Total Factor Productivity
to Labour Productivity Growth in East Asia

	Average Annual Per Cent Change in Output Per Worker	Contribution of Physical Capital (per cent) *	Contribution of Total Factor Productivity (per cent) *
India (1993-04)	4.6	39	50
China (1993-04)	8.5	49	47
East Asia (excl. China)			
1960-80	4.0	55	30
1980-93	4.6	57	30
1993-03	2.5	72	12

* The rest of the contribution to output per worker growth comes from inputs of land and education, which are not shown.

Source: Table 1, Bosworth and Collins (2006).

Chart 2
Growth in Output per Worker, 1980-2000
 (average annual per cent change)



Source: Bosworth and Collins (2003).

of less than 2 per cent of GDP, compared with around 4 per cent of GDP in China and similar levels in Southeast Asia. FDI accounts for around 5 per cent of total investment in India, and is not as strongly connected to exports as in many Asian countries (such as China, where for-

eign ventures directly and indirectly account for over half of all exports).

Nevertheless, India enjoys a comfortable external position, thanks to FDI and other capital inflows that more than fund its current account deficit. As a result, India's growing foreign exchange reserves now exceed the public sector's external debt. That, in combination with a floating exchange rate that can adjust to external shocks, insulates India from the type of external risk common in many developing countries.

Productivity

The data problems and measurement issues that arise in measuring productivity in industrialized countries are even more daunting in India, due to shortcomings in the statistical system. For example, reliable economy-wide jobs data are available only every five years.⁴ With that caveat, this section reviews India's key productivity numbers.

The data indicate that the acceleration in economic growth appears to be coming increasingly from increases in total factor productivity (TFP) rather than greater inputs. A steady increase in TFP appears to be largely driving growth in output per worker. In fact, according to a global survey of productivity trends, TFP accounted for the bulk of the increase in output per worker in India during 1980-2000, higher than in all other regions of the world except China, which had a similar trend (Bosworth, Collins, and Virmani, 2006). Table 2 indicates that improving TFP accounts for a larger share of the increase in output per worker in India in recent years

4 Bosworth, Collins and Virmani (2006) base their productivity estimates on employment data from comprehensive national surveys available every five years, due to the shortcomings of India's annual employment survey data. Indian GDP estimates include both the formal and informal (or "unorganized") sectors of the economy. The estimate of GDP in India's large "unorganized" sector comes from using the labour input method, combined with measures of value added per worker based on enterprise surveys. The labour input data for the unorganized sector (which has the bulk of the workforce) come from surveys conducted every five years. Estimates of value added between the survey years are based on interpolation and estimates after the survey year are based on extrapolation of labour inputs using growth rates between the two most recent benchmark years. The authors state (page 11) that "(t)he problems with annual output estimates in non-benchmark years suggest that debates over the precise timing of changes in India's rate of GDP growth around episodes of economic reform should not be taken seriously."

than it did in East Asian countries during their years of rapid GDP growth.

From a comparative perspective, India has enjoyed better growth in output per worker than many parts of the world in recent decades. Chart 2 indicates that India did much better than Latin America and Africa during 1980-2000 and only slightly worse than East Asia. However, output per worker grew twice as fast in China than in India during that period.

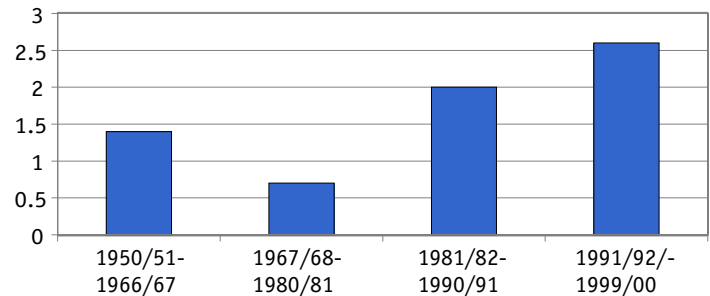
TFP growth appears to have accelerated steadily since the 1980s, according to a study by S. Sivasubramanian (2000). That study also found that TFP accounted for a rising share of output growth in the 1990s (almost 40 per cent) compared with earlier decades.

A more recent paper by Barry Bosworth, Susan Collins, and Arvind Virmani (2006) confirms this trend. They find that output per worker grew only 1.3 per cent annually during 1960-1980, when GDP growth was also at a low 3.4 per cent. TFP growth was barely above zero, according to their calculations, indicating that growth in output was almost entirely driven by growth in inputs. In contrast, growth in output per worker nearly tripled to 3.8 per cent during 1980-2004, while TFP increased ten-fold to 2 per cent. A recent IMF paper also finds that TFP started increasing around 1980, rising steadily for the next twenty years (Rodrik and Subramanian, 2004).

The acceleration of economic growth in the 1980s was likely due to a mild dosage of industrial deregulation. However, the spurt in GDP growth proved to be unsustainable as it depended too much on growing government indebtedness.⁵ India did not undertake deeper reforms until the early 1990s following a balance of payments crisis that nearly resulted in a sovereign default. The data show that output per

Chart 3

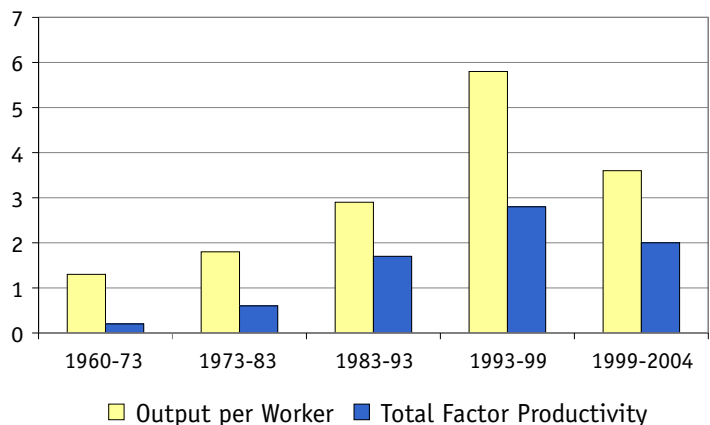
Total Factor Productivity Growth in India
(average annual per cent change)



Source: Sivasubramanian (2000).

Chart 4

Labour and Total Factor Productivity Growth in India
(average annual per cent change)



Source: Bosworth, Collins and Virmani (2006).

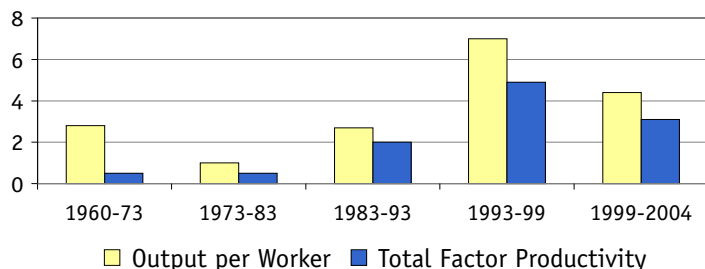
worker rose dramatically in the 1990s, along with TFP.

Bosworth, Collins, and Virmani base their calculations on time periods that coincide with the availability of more comprehensive survey data. Their figures indicate that the growth in output per worker in the economy as a whole averaged 5.8 per cent during 1993-99, compared with 2.9 per cent during the previous ten years (Chart 4). More than half the growth in output per worker during 1983-99 was due to the contribution of

⁵ For a lively debate on the question of whether Indian GDP growth started to accelerate in the 1980s, before structural reforms began, or in the 1990s, after the government liberalized, see Rodrik and Subramanian (2004) and a rejoinder by T.N. Srinivasan (2004).

Chart 5
Labour and Total Factor Productivity Growth in the Services Sector in India

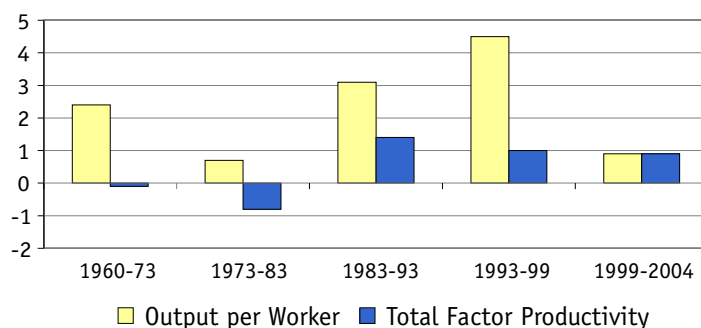
(average annual per cent change)



Source: Bosworth, Collins, and Virmani (2006).

Chart 6
Labour and Total Factor Productivity Growth in Industry in India

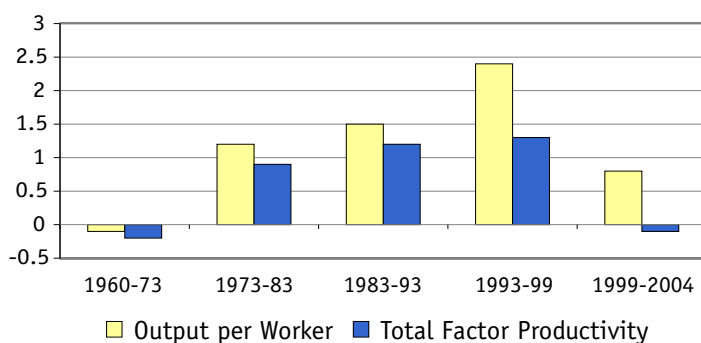
(average annual per cent change)



Source: Bosworth, Collins, and Virmani (2006).

Chart 7
Labour and Total Factor Productivity Growth in Agriculture in India

(average annual per cent change)



Source: Bosworth, Collins, and Virmani (2006).

TFP. In contrast, TFP is estimated to have accounted for only 15 per cent of the growth in output per worker in India during 1960-1973, rising to 33 per cent during 1973-83.

The sharpest improvement was in the services sector, where output per worker grew an astonishing 7 per cent per year in 1993-99, compared with only 2.7 per cent in the previous decade (Chart 5). Much of the growth in the services sector came from the booming information technology and related sectors, such as call offices and back office work, which together employ about 1.6 million people and account for about 3 per cent of GDP (Crisil Research, 2007). However, other service industries, such as insurance, banking, and telecommunications, have also grown rapidly in recent years based on new technology and greater competition.

The industrial sector (which includes manufacturing, mining, electricity and utilities) showed a more modest rise in output per worker, going to 4.5 per cent from 3.1 per cent (Chart 6). Agriculture was the lagging sector, with output per worker rising only 2.4 per cent during 1993-99, compared to 1.5 per cent in the previous decade (Chart 7).⁶

The productivity figures for 1999-2004 are affected by a severe drought that reduced growth in the fiscal year 2003-04 (ending in March 2004), which had an impact on industrial production as well as agriculture. GDP growth accelerated sharply afterwards, averaging over 8 per cent annually. Hence, it is likely that the productivity trend numbers post-2004 are much higher than the levels shown for 1999-2004 in Chart 4.

The recent acceleration in economic growth is also based on greater use of capital, as India's domestic savings and investment rates have increased in recent years. Governments at all levels have reduced their fiscal deficit, thereby

⁶ Some analysts have questioned the substantial rise in labour productivity and in TFP in the service sector since the early 1990s. It is possible that output in the service sector has been overstated. See Bosworth, Collins and Virmani (2006:21).

boosting the level of public sector savings. Economic reform has also raised the profitability of private investment, leading to a rise in corporate sector savings.

India's domestic savings rate averaged 24 per cent of GDP during the decade of the 1990s (Table 3), before rising to 32 per cent in 2005-06. The increase reflects an impressive turnaround in public sector savings (which rose a net 3.5 per cent of GDP over the period). The numbers indicate that savings and investment in India are largely driven by the private sector, much more than in many developing countries (especially in East Asia). Moreover, the bulk of private savings come from the household sector (and not the corporate sector), in contrast with countries in Southeast and East Asia.⁷

The investment rate has also been rising, reaching 33.8 per cent of GDP in 2005-06 after averaging 24.4 per cent in 1999-2002. Rising GDP growth has led to high capacity utilization rates in industry, which have been hovering over 90 per cent since 2005, spurring firms to invest to increase capacity. FDI inflows may exceed US \$10 billion in 2006-07, giving a further boost to investment levels. The gap between the investment rate and domestic savings rate, the "current account" deficit, has been modest in India. The current account was in surplus from 2001 until 2003, before moving into a deficit of around 1 per cent of GDP.

Until the very recent increase in investment levels, GDP growth in India had been less dependent on capital accumulation than that in other fast-growing Asian countries. Growth had been led by the service sector, which relied heavily on labour inputs and is less capital intensive than industry. A World

Table 3
India's Gross Domestic Savings and Investment
(as per cent of GDP)

	Average 1999-00 to 2001-02	2002-03	2003-04	2005-06*
Household Saving	21.5	22.7	23.8	22.3
Private Corporate Sector	4.1	4.2	4.7	8.1
Public Sector	-1.5	-0.6	1.2	2
of which Government Administration	-5.5	-5.2	-3.7	-
of which Enterprises	4	4.6	4.9	-
Total Savings	24	26.4	29.7	32.4
Gross Domestic Investment	24.4	25.2	28	33.8

* The 2005-06 data are preliminary from the Ministry of Finance.

Source: RBI Annual Report 2005-06. Government of India's Economic Survey 2006-07.

Bank study indicates that the fastest growing sub-sectors of the Indian economy have had lower capital intensities (Mishra, 2004). However, industrial growth has accelerated to above 9.5 per cent since 2004-05, compared with around 7 percent or less in earlier years. Spending on capital-intensive projects, ranging from steel plants to highways, has also picked up, indicating that capital accumulation will likely play a greater role in contributing to future output growth.

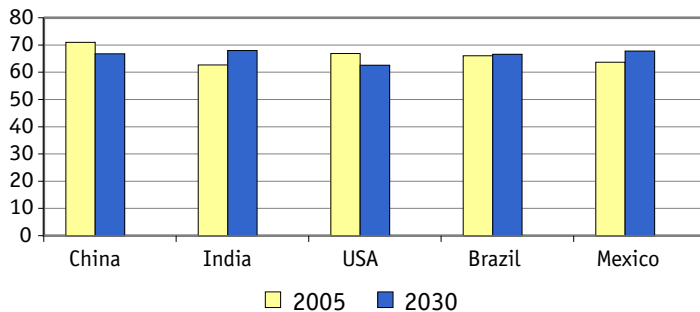
Factors Driving the Economy

Since the early 1990s, the government has enlarged the role of market forces, given more freedom to the private sector, and cut barriers to domestic and foreign competition.

Industrial deregulation, a more flexible exchange rate, stronger debt and equity markets, and lower trade barriers have injected resilience into the economy, dramatically strengthening its external position. The "current account" of India's balance of payments is open and convert-

⁷ See Mishra (2004) for a discussion on the composition of India's domestic savings. Savings by the "corporate sector" within the private sector typically far exceed "household sector" savings in Korea, Japan, Thailand, Philippines, as well as the United States. The "household sector" in India includes unincorporated businesses, which may distort the comparison with other countries due to differing data definitions. Nevertheless, the level of household sector savings is likely to be quite high even if adjusted for the savings of businesses that are not formally incorporated.

Chart 8
Per cent of Population 15-64 Years



Source: UNDP (2004).

ible and the “capital account” is increasingly open, especially for FDI and foreign portfolio investment. The government has also been loosening controls for Indian corporations to move capital in and out of the country, but maintains restrictions on banks and individuals.

The recent spurt in GDP growth above 8 per cent has generated much debate about its causes, and whether it represents a long-term trend. Most analysts agree that the pace of structural reform (such as privatization, financial sector liberalization, labour law changes) has decelerated since the election in May 2004 of a coalition government led by the Congress Party and supported by Leftist political parties strongly opposed to further liberalization.

The current growth rate likely reflects the lagged impact of earlier reforms that forced many firms to make painful adjustments and become more competitive. It also reflects certain micro-economic reforms started by the previous government (such as tax reform) that have been extended by the current government. Moreover, the impulse for reform has shifted to India’s state governments, which are increasingly competing with each other for investment. Some states have become more aggressive than the national government in pursuing pro-growth policies and promoting private investment. Such trends, along with the modest

reform initiatives that the current government is able to advance (such as loosening restrictions on FDI and channeling private investment into airports) despite opposition from its coalition supporters, have strengthened private sector confidence about the durability of pro-growth economic policies.

India appears poised for continued strong economic growth thanks to both faster growth in inputs of capital and labour, as well as TFP. Government policy is likely to create better incentives and remove obstacles for investment, as well as raise the level of competition in different markets. Demographic trends should contribute to growth. Over half of India’s population is less than 25 years of age, heralding a falling dependency ratio as the labour force grows in coming years. The resulting higher share of the population of working age could boost the country’s savings rate (the so-called “demographic dividend”). Chart 8 indicates that India is projected to have a higher share of its population in the prime working age bracket (15-64) than a number of other major countries.

Economic liberalization

The government is likely to continue reducing its direct role in the economy, through gradual privatization and deregulation. Although the central government has largely abandoned the privatization program started by its predecessor, privatization continues at the state level (including in states run by the same Leftist parties who oppose it at the national level). Moreover, central government state-owned enterprises (SOEs) are coming under greater competition thanks to economic liberalization, forcing them to improve their operations. Large SOEs such as telecoms, airlines, oil and gas, steel, insurance and even public sector banks have all lost market share in recent years to private competitors, forcing them to modernize their operations, improve technology, and even reduce their

bloated workforces (mainly through voluntary retirement packages and attrition).

The government continues to gradually remove restrictions on private sector investment, recently opening the defense sector to private firms. The sensitive coal sector (which is a major employer in the poorer eastern part of India) has also been partially opened to competition from public sector and private sector firms. The government still “reserves” the production of about two hundred consumer products for small-scale industries (which typically lack the scale and the technology to operate efficiently), but is quietly pruning the list of such industries every year.

Infrastructure investment

Growing investment in infrastructure also augurs well for productivity growth. Some infrastructure sectors are being privatized, such as telecoms and some ports and airports (including in Delhi, Mumbai, Bangalore and Hyderabad). An intensely competitive telecom sector has given Indian consumers some of the lowest long-distance calling rates in the world. The number of phone connections is likely to exceed 250 million in 2007, from barely 20 million at the beginning of the current decade. The government-run Indian railways has recently opened container services to the private sector, thereby spurring much-needed investment and modernization. A massive road-building program is boosting connectivity and lowering transaction costs. The creation of modern highways linking major cities and ports has already reduced transportation costs, allowing firms to operate at a larger scale. Such steps should continue to boost productivity over the coming years.

External integration

The beneficial impact of external liberalization is set to grow as trade barriers fall. Prior to the 1990s, India had the highest tariff barriers on imports of any non-communist country and supplemented them with import quotas and other policies that discouraged trade. Since then, most non-tariff barriers have been removed and tariff rates cut dramatically, with peak tariff rates falling to 10 per cent from 155 per cent. As a result, exports and imports of goods and services have reached one-third of GDP, about double their level in 1990. Exports of goods and services have grown about 25 per cent annually since 2000, compared with 6 per cent during 1995-2000.

The composition of Indian exports has become more diverse and increasingly contains goods that account for a growing share of world trade, auguring well for continued export growth. For example, auto parts exports rose to about US \$2 billion in 2006, growing around 40 per cent annually. Exports of passenger vehicles reached over 170,000 in 2005 from 46,000 in 2001 and are poised to continue rising (*Economic Times*, 2007). Intra-industry trade, a good measure of insertion into global production chains, rose to 18 per cent of India’s total trade in 2001 from 12 per cent in 1992 (Purfield and Schiff, 2006:chapter 3). India’s share of global exports of goods is now about 1 per cent, up from 0.6 per cent in the late 1990s.⁸

The services sector accounts for a growing share of world trade. India’s share of global service exports reached 1.4 per cent in 2004, up from 0.6 per cent in 1995. Service exports from the information technology and related business processing operations (such as back

8 Intra-industry trade in East Asia rose to 75 per cent of total trade in 1996-2000 from 42.5 per cent in 1986-90, indicating the greater specialization of production within that region. India’s share of goods exports was around 2 per cent of world trade in the 1950s before falling to 0.5 per cent in the 1980s as India pursued an inward-looking growth strategy while many other Asian countries focused on trade and export-led growth. It is interesting to speculate how India would look today had it pursued policies since 1950 that kept its share of world trade at 2 per cent.

offices and call centers) have been growing around 35 per cent per year in recent years and are likely to contribute just over 1 percentage point to GDP growth in coming years. India's competitive advantage in the service sector, thanks to an ample supply of English-speaking technically educated people (compared with most developing countries) augurs well for future export growth.

More competitive factor markets

While deregulation of markets for goods and services should sustain growth prospects, India will also benefit from slowly creating competitive markets for land, labour and capital, the basic factors of production. The country has made more progress in creating competitive markets for capital than for land and labour (the latter is discussed in the next section). Market forces largely allocate and price capital, thanks to financial sector deregulation, and the development of a sophisticated stock exchange.

The Indian financial sector has expanded rapidly in recent years, spurred by growing competition and sustained by continued financial stability. Bank lending is approaching 50 per cent of GDP in 2007 from barely 30 per cent in 2000. Government-owned banks account for about 75 per cent of the assets in the Indian banking system. Their operations have improved in recent years due to growing competition from private sector banks and growing commercial pressure from their minority shareholders. The government has gradually reduced its holding in most public sector banks towards 51 per cent, retaining management control but allowing market forces to have a greater influence over management.

Indian firms increasingly benefit from maturing stock markets. India's National Stock Exchange and the Bombay Stock Exchange are ranked third and fifth respectively in the world by the number of transactions. They are increas-

ingly approaching world-class standards thanks to computerization, modernization of the market infrastructure, an improving regulatory and legal infrastructure, and the availability of ample trained personnel. Economies of scale (due to the large number of companies and speculators), plus better infrastructure make it easier for firms, especially mid-size firms by global standards, to gain access to liquid equity markets in India than in most developing countries. For example, many mid-size Indian firms have been able to raise as little as US\$15-20 million easily through initial public offerings, an advantage compared with their competitors in many emerging markets.

The development of a market for capital has exceeded the development of a market for land. Poor land records, inflexible zoning laws, and continued government intervention have constrained the development of genuinely competitive markets for land. Ownership of land is unclear or in dispute in much of the country. However, many states have progressed in computerizing land titles, thereby reducing uncertainty and the cost of transactions. Over time, this should facilitate more land sales, as well as encourage the use of land as collateral for loans.

The acquisition of farmland for building industrial zones, and the resulting displacement of farmers, has created immense controversy. Various state governments are now experimenting with different policies for acquiring such land and for compensating the owners. Over time, more states are likely to discard the currently predominant policy of forcing farmers to sell their land directly to the government for re-sale to private developers, an opaque procedure that gives scope to corruption. Several states are now experimenting with flexible zoning and tenancy laws, moving towards a genuine land market with a diminished role for the government as an intermediary.

The positive impact of flexible markets is already apparent in growing investment to con-

nect farmers directly with retail consumers, a development that should sustain productivity and economic growth in coming years. Deregulation, the building of rural roads, and the growth of sophisticated commodity markets is already transforming Indian agriculture. Private firms are increasingly supplying more inputs and buying more output directly from the farmer, cutting out the middleman. Financial institutions are becoming more active in funding agriculture, especially under new arrangements such as contract farming and futures markets that increasingly separate and re-allocate the risks in farm production. The recently started re-organization of farm production with better technology, more specialization, greater quality control, and standardization will facilitate the growth of agro-industry and better supply chains. That, along with deeper spot and futures markets for agricultural commodities, will facilitate the diffusion of technology and boost output and labour productivity on the farm.

A maturing private sector

During the first decade of reform in the 1990s, Indian firms gained experience in improving management practices, acquiring new technologies, re-organizing production processes, and learning to tighten their supply chain. India's earlier investment in the public institutions of a modern economy, including a legal system, property rights, and technical and management education facilitated this quick adaptation. The impressive level of "learning by doing" was accompanied by much "creative destruction", as many old firms declined or went out of business in a more competitive environment, replaced by new firms.

Since 2000, more Indian firms have moved to the global stage, investing or trading abroad. Firms in sectors such as steel, auto parts, pharmaceuticals, machine tools, packaging, information technology, mining, pulp and paper, and oil refining have undertaken massive outbound FDI

(including mergers and acquisitions). Overseas bids by Indian firms exceeded US\$20 billion in 2006. As a result, a growing segment of India's corporate sector is now fully subject to global competition, trends, and ideas, auguring well for their own productivity growth and its spillover into the rest of the economy.

The growth of more sophisticated Indian firms will create a globally-oriented private sector that can leap ahead of its counterparts in many other Asian countries that are on the whole more prosperous. New entrants to the global economy often create new business models that undermine the competitiveness of older firms, as Japanese car firms did to their American competitors. Indian firms may create their own business models in key sectors, especially in services. For example, new private hospital chains in India are experimenting with combinations of technology, information systems, and corporate organization that could make them more efficient than their counterparts abroad, who are hindered by their legacy. Corporate India will likely have a disproportionately larger international presence for a country of India's low per capita income, thanks in part to its large absolute size and its familiarity with English.

These trends suggest that India's GDP could grow steadily around 7-9 per cent per year in the coming decade. For India to grow at a faster pace, it would have to address the constraints described in the next section.

Factors Constraining the Economy

The recent improvement in the health of India's private sector contrasts with the deep-seated problems of the public sector, which have led to inadequate public investment in infrastructure, education and health care. Moreover, public institutions, including the bureaucracy, have been weakened and politicized in recent

decades, limiting their ability to act quickly, impartially and effectively. As a result, India's growth path will continue to differ from that of many East Asian countries (such as China and Korea) where the public sector successfully mobilized vast resources into building infrastructure and was able to provide services such as education and health care to improve the level of human capital.

Fiscal deficits

India's poor fiscal performance constrains its growth prospects. The country's general government deficit (which includes the central and state governments) has averaged 8 per cent of GDP since 1980 (Acharya *et al.*, 2003). The deficit reached a peak of almost 10 per cent of GDP in 2002-03 before declining to around 7 per cent in recent years, thanks to buoyant revenue growth. Computerization, aggressive tax reform to cut rates, widening of the tax base, as well as the introduction of a limited value added tax at the state level, have boosted tax revenues.⁹

The importance of fiscal correction is highlighted by a World Bank study that indicates that an increase in public sector savings by 1 percentage point of GDP results in total savings rising by 0.67 percentage points of GDP (Mishra, 2004). The same study calculates that a one percentage point increase in the share of the working age population in the total population leads to an increase in the savings rate by 0.88 percentage points.

The historically poor fiscal performance has not led to a crisis, but it exacts a toll on the economy. Budget deficits swallow much of the country's financial savings, leaving less money available for the private sector to invest. About 30 per cent of the government's revenues are devoted to paying interest on its debt, and much of the rest to paying salaries for a bloated civil ser-

vice. As a result, the government has scant resources for providing public services and for investing in infrastructure such as roads and power supply. Moreover, the composition of public spending (i.e. the large share going to salaries and subsidies instead of investment) means that India will continue to have weaker social pillars to support GDP growth than East Asian countries at the time of their miracle growth years.

The key to sustaining recent fiscal progress, and thereby sustaining economic growth, lies in moving to a national goods and services tax, which the government hopes to implement in 2010. The higher tax revenues at both the central and state level from such tax reform could reduce the fiscal deficit and, if combined with restraint on current spending, could allow for more public sector investment. Moreover, the new tax system would boost economic efficiency. The current system of excise taxes, sales taxes and other levies segments India into many state markets. A national level goods and services tax would create a true national market, and boost output and productivity by allowing firms to optimize the location of production, logistics and storage.

Poor infrastructure and business conditions

Poor physical infrastructure also constrains India's growth. According to IMF estimates, Indian firms lose around 9 per cent of the value of their sales due to power shortages, compared with about 2 per cent in China, less than 3 per cent in East Asia on average, and less than 6 per cent in Pakistan (IMF, 2006). The cost of electricity for industrial users is also much higher than average costs in Southeast Asia or Latin America. India's money-losing state electricity boards recover around 70 per cent of the cost of supplying power. Their losses make it difficult to invest in providing reliable power, let alone

9 The consolidated tax revenues of the state and central governments are likely to exceed 17 per cent of GDP in 2006-07 from below 14 per cent in 2001-02.

increase generating capacity to overcome power shortages (the peak shortage in electricity supply is above 12 per cent). As a result, over 60 per cent of Indian manufacturing firms rely on their own generators for power, raising the cost of doing business. Captive power plants account for about 25 per cent of total capacity in India and may account for more in the coming decade.

Economic growth is also constrained by a poor regulatory and bureaucratic climate. For example, World Bank surveys show that the number of days to start a business in India is 89, compared to 41 in China. India ranked 76th in a list of 117 countries in terms of the burden of regulations imposed on the private sector (China ranked better at 30th) (Purfield and Schiff, 2006).

Rigid labour laws

Infrastructure and regulatory shortcomings have combined with rigid labour laws to restrict the growth of new jobs. Rigid labour laws make firms reluctant to hire workers in good times for fear of not being able to shed them in bad times. World Bank indices on the rigidity of hiring, and especially firing, a worker show that Indian firms suffer from more rigidity than firms in China, Russia and Malaysia.

According to IMF calculations, a percentage point increase in output in the “organized sector” of the economy leads to a half percentage point increase in the number of jobs (Purfield and Schiff, 2006:17).¹⁰ Only about 10 per cent of the labour force is in the “organized sector” but it has the best paid and most productive part of the workforce. The low elasticity of job creation with respect to output growth reflects the incentives employers face to substitute machinery and equipment for labour, a perverse outcome in a country with abundant labour. As a result, output per

worker may be increasing faster than would be the case if labour markets were more flexible and facilitated the hiring of more unskilled workers in the organized sector.

India’s labour laws fall under the jurisdiction of both the central and state governments. The central government is unable to loosen the law due to opposition within the Congress Party and from its Leftist supporters outside the government. In contrast, many state governments have been vocal in demanding more flexible labour laws, but they cannot act alone. However, in practice, many state governments (whose task it is to apply most of these laws) have ceased to be vigilant in enforcing the law, creating some de facto labour flexibility (especially in the states of Andhra Pradesh and Gujarat).

Most companies try to gain flexibility by relying on informal labour in the “un-organized” sector. Many firms overcome legal obstacles by offering voluntary retirement packages to redundant workers and by relying on sub-contractors who enjoy greater flexibility. The current laws impose a cost on many firms, as well as preventing workers in the vast “un-organized” sector from entering the more lucrative and secure “organized” sector of the labour market.

Labour law liberalization would increase both employment and growth by removing an important barrier for the expansion of low-skilled manufacturing. Progress in this regard will be slow in the coming years, but may accelerate if the opposition Bharatiya Janata Party returns to power after the next elections (since they have committed to liberalizing labour laws).

Low level of human capital

The micro-economic rigidities that constrain productivity growth are compounded by India’s generally low level of human capital. Only 76 per cent of youth aged 15-24 are literate, based on

10 The “organized” sector in India is defined as firms with 100 employees or more and no electricity or firms with 50 employees or more with electricity.

Table 4
Industry as per cent of GDP

	1980	2004
India	28	27
China	42	46
Thailand	37	44
Malaysia	42	50
Latin America & Caribbean	36	34
East Asia & Pacific	40	45

Source: *World Development Indicators, 2006*.

Note: Industry includes mining, manufacturing, construction, and utilities.

their ability to read and write simple statements (World Bank, 2006). The average number of years of schooling was 4.5 in 2000 in India, lower than China (6.4), Thailand (6.5), Malaysia (6.8), and Indonesia (5.0). In fact, China and Malaysia scored higher in 1980 than India scored in 2000, and Thailand was almost at the same level. Only 14 per cent of Indian workers aged 15-64 had completed secondary education in 2004 and only 6 per cent had a university education (Bosworth, Collins, and Virmani, 2006:Tables 7 and 8). The low figures indicate that India's "demographic dividend" is a two-edged sword. It could create immense problems if India fails to create enough jobs for the growing workforce, and to increase their skills.

Weakness of the industrial sector

The shortcomings discussed above have constrained the growth of Indian industry, which faces handicaps in fully utilizing resources like land and labour in the most efficient manner. The service sector, by comparison, has greater scope to work around these impediments, especially labour laws. Partly as a result, both manufacturing and the wider industrial sector as a whole account for a smaller share of India's GDP and its labour force than in other developing countries. Manufacturing accounts for only 17 per cent of India's GDP, compared with over 30 per cent in China and 25-35 per cent in Southeast and East Asia. The industrial sector as

a whole accounts for only 27 per cent of GDP, and services account for 51 per cent, giving India a premature profile of a rich country past its industrializing years (Table 4).

The comparatively slow pace of industrialization in India has a direct impact on poverty by limiting the movement of workers out of low-wage agriculture. The share of the total workforce in agriculture was 71 per cent in 1978 in both China and India. However, it has fallen in recent years to only 47 per cent in China, compared with 57 per cent in India (Bosworth and Collins, 2006:Table 3). Employment growth in the manufacturing sector averaged around 2.5 per cent per year in India in the 1990s, compared with about 4-6.5 per cent in Southeast Asian countries during their years of rapid industrialization (Mohan, 2002).

The shift of labour from agriculture to other sectors (which have higher productivity levels) has likely contributed one percentage point to output per worker growth in India since 1993 (Bosworth, Collins, and Virmani, 2006). India's industrial growth has accelerated to over 9.5 per cent annually since 2004-05, well above the pace of advance in the previous decade. Higher growth has likely accelerated the shift of labour from agriculture to industry, thereby boosting overall productivity in the economy in the last four years.

Historically, India placed comparatively greater investment in higher education than in basic education, compared with most East and Southeast Asian countries. That legacy, plus other policies that hindered labour-intensive manufacturing, have created an unusual pattern of output in comparison with other developing countries. Indian firms now specialize in skill-intensive manufacturing sectors, competing with firms in much richer countries such as Malaysia and Korea.

According to an IMF study, the pattern of output in India's faster growing states is similar to that of much richer industrial countries (Koch-

har, Kumar and Rajan, 2006). The share of manufacturing in total output in those states has either been constant or declining, in contrast with the opposite experience of East and South-east Asian countries at a similar level of income. In some cases, the share of manufacturing in total output in fast-growing Indian states has increased due to the growth of sub-sectors that rely heavily on skills or capital, not on unskilled labor. While gradual liberalization of labour laws may change this pattern of output, the legacy of India's development pattern may lead it to specialize in the manufacture of goods that require more skill, compared with other countries at the same level of wealth.

Conclusion

India has created the basic rules of modern economic and political life. While the country's institutional framework needs strengthening, it will allow India to prosper without drastic changes. Modern economic and political institutions, such as the rule of law, property rights, and political democracy, are largely in place. The institutions, especially the public sector, need improvement but not drastic surgery.

India is unique in being a democracy for sixty years without moving towards free markets until barely fifteen years ago. It is now reaping its earlier investment in political development, as well as its later investment in economic reform that has unleashed the potential that was created, but underutilized in the first four decades after independence. The stock of highly educated people, the legal and regulatory framework, and the familiarity with business processes are all quite advanced for a country at India's current level of per capita income.

Over the next decade, India is likely to grow at a rate approaching that experienced by East Asian countries during their peak growth years, but with some differences. India does not have a political system that can centrally mobilize capital

as rapidly and as extensively as those countries. India's looser institutional and political framework may have contributed to lower growth in factor inputs (especially capital) in the past, and hence in GDP growth, compared with East Asia. However, India's emerging policy framework appears to be favorable to both higher factor accumulation and TFP growth in coming years, thanks to reform that has generated better incentives for investment and growth.

India's GDP growth in recent years has depended proportionately more on TFP than on capital accumulation, compared with China and other fast growing countries. This is partly due to India's growth strategy, which is largely based on the market cost of capital (in contrast with subsidized capital in China and many East Asian countries during their years of rapid growth). It is also due to the comparatively weaker development of Indian industry and physical infrastructure, which requires more capital spending. However, recent policy changes have sparked more investment in infrastructure, implying that capital accumulation could play a proportionately larger role in Indian growth in coming years.

On the whole, the Indian economy appears set to meet the challenge of accumulating more capital, provided that the government controls its fiscal deficit (to avoid lowering public sector savings), and continues with the liberalization of more sectors of the economy. The industrial sector is poised to contribute to a larger share of GDP growth in coming years. The distinction between India as the "back office" and China as the "workshop" of the world is disappearing, as Indian industry grows. Growth in agriculture is likely to accelerate moderately in coming years, at least in those parts of the country where the conditions are favorable for agro-industry. Finally, recent political debate in India on problems in health and education could lead to innovative policies that raise the level of human capital.

In contrast with China and East Asia (during their period of rapid growth), India has seen power at the national level rotate across all major and most minor political parties in the last two decades. During the same period, the consensus on pro-investment and pro-growth policies across the political spectrum has only strengthened. Hence, India is less vulnerable to sharp changes in economic policy in coming years, despite the likelihood of rule by shaky coalition governments.

India is a successful case of globalization. The country's basic features are more likely to be strengthened than threatened by more integration with the world economy. Its political system will become more transparent with growing prosperity, a burgeoning middle class, and greater media scrutiny. Its legal system is coming under greater pressure to provide speedier decisions and faces more scrutiny for its integrity. India's regulatory system is catching up with the framework of modern economies, with stronger regulators in the stock market, telecom and insurance sectors and new regulators emerging in other infrastructure sectors (such as airports, oil and gas). Its central bank is becoming a more nimble institution that can better focus on monetary policy and manage a more sophisticated economy.

From an economic perspective, India has been a success but a qualified one. From a broader perspective, India has been a more notable success as a diverse and democratic country with immense poverty that has managed to gradually liberalize and integrate with the global economy while enjoying steady economic growth and rising living standards.

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