

India in the Era of Economic Reforms – From Outsourcing to Innovation

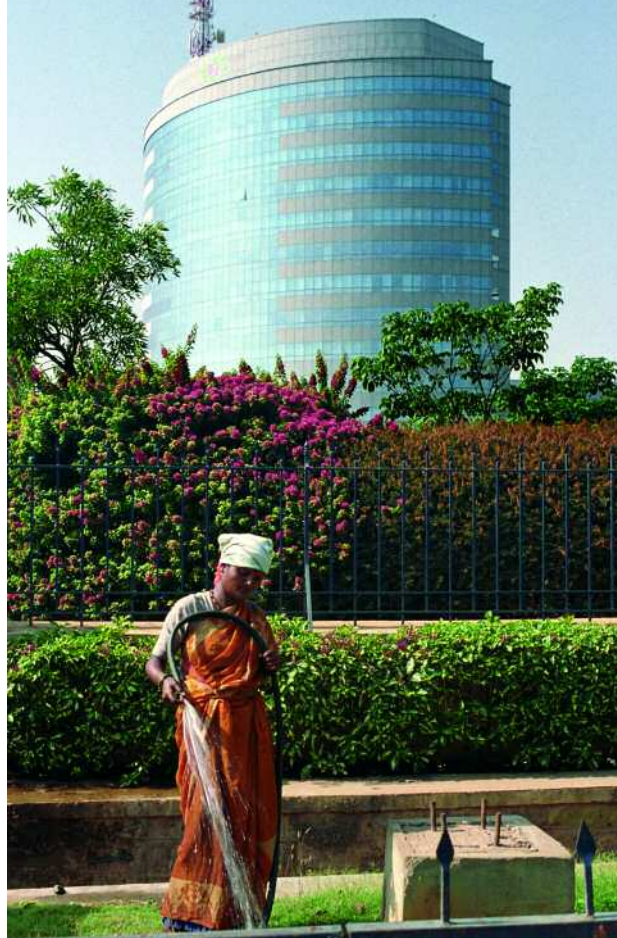
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India is one of the fastest growing economies in the world today. The economic reforms implemented in the country since the early 1990s have helped India grow at 6-plus percent on an average since 1992-93. We believe that this growth, though impressive, is still below India's potential of around 8 percent per annum. Should India be able to implement the remaining reforms on its agenda and re-orient governmental spending towards high priority areas of health, education and infrastructure development, then it is very likely to attain and sustain rapid economic growth for decades to come, though at a gradually diminishing rate as India's per capita income rises.

Relative to agriculture, the manufacturing sector is a much more consistent engine of growth, and it is likely to play a growing role in the Indian economy in the years ahead. As China's experience demonstrates, trade liberalization in a low-wage, surplus-labor environment permits a rapid expansion of export-oriented manufacturing industry, which can absorb large numbers of workers to provide goods for the world market. India's insertion into the world economy has been much less dramatic than China's, but it has been important nonetheless. Interestingly, India's initial export boom was in IT-based services, though now manufacturing exports are growing very rapidly as well. China's reforms were bolder than India's in promoting both foreign direct investment (FDI) and manufacturing exports, and China benefited immensely from the vast inflows of FDI, especially from the overseas Chinese investors, based in Hong Kong, Taiwan, Singapore and Macao.

India's inland areas will, however, likely continue to face the same problems as China's inland areas, particularly in rural settings. Even with faster national growth, the inland areas are likely to grow more slowly than the coastal areas, opening a widening gap between the fast and slow-growing regions. This does not mean absolute stagnation of the interior, of course, but it will likely provoke political pressures as well as increasing internal migration from rural areas to cities and from the interior to the coast. One of the biggest challenges for India, like China, is to think through and inject fresh growth impetus in its rural economy. Among other things, this would entail raising agricultural productivity, promoting agro-based industries in the rural areas, improving rural infrastructure in the areas of power, roads, telecommunications and water and providing access to good quality healthcare and schooling in India's 600,000 villages. The scale of the challenge is, of course, immense, but so too is India's capacity.



India's prowess in the international software sector has radically changed the industrial landscape of cities like Bangalore.

How will India fare as the globalization process continues? Going by the experience of the last 14 years of India's post-reform period, it would not be unreasonable to say that the coastal states of western and southern India along with regions with high urbanization rates will probably continue to grow faster than the northern and central states of India. In the post-reform period, some states have achieved rapid economic growth, while others have languished. The difference of performance across states can be explained by a combination of factors. The geographical and demographic characteristics of states have been important. To a certain extent the differences are a manifestation of global economic forces acting upon India, and to some extent they reflect differences in economic policies at the state and union levels. The market reforms will tend to make the rich states richer in relative terms, and the poor states are likely to lag behind, an experience similar to that of China.

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Fortunately, economic reform and public-sector investments can improve conditions in India's relatively laggard northern and central states, especially in the Gangetic valley. There is no reason for continuing with large, untargeted, and non-merit goods subsidies for the slow growing states. Perhaps the key step in the Gangetic plain is to improve basic infrastructure as well as health and education systems so that the vast rural populations can take part in more rapid national economic growth. They will do so through increased exports to coastal states, and greatly improved productivity for local production. We should stress that while China's hinterland has lagged behind the coastal regions, the Chinese hinterland too has enjoyed rapid economic growth. India must work harder to do the same.

We are of the view that the large and persistent fiscal deficits in India are a serious cause for concern which can jeopardize the sustainability of high growth. The governments at the federal and state levels urgently need to reduce their dis-savings sharply through cuts in, and refocusing of explicit and implicit subsidies, and stricter control over non-developmental expenditure. Public investment has to be stepped up significantly in critical infrastructure, such as power, ports, and roads and in primary health and education, especially in the rural areas. Additionally, major challenges remain in the areas of privatization of state-owned enterprises, labor law reform, exit policies, and power sector reforms.

Let us now turn to a brief discussion of India's information technology sector in general, and the outsourcing processes in particular. A decade-and-a-half of opening

up of the Indian economy has produced new dynamism, most dramatically in the IT sector, but in others as well. The new technologies, especially IT and biotechnology (BT) give new opportunities for economic and social development. India's strengths in IT will be an important bulwark of export growth for many years to come.

High-tech services, such as the information-and-communications-based industry (e.g. software production), or financial services, are almost always reliant on a network of universities and an urban labor market. These sectors are much less dependent on coastal access, however, since much of their business can be transacted over telephone and Internet connections. A high quality of life of the location, as an attraction for highly mobile skilled workers, probably looms larger in these sectors than in other sectors of the economy. India's clear and growing capacity in service-sector exports based on information technology is now recognized the world over. Year after year, the World Economic Forum's Global Competitiveness Reports have confirmed the high international opinion of India's engineering and scientific capacities, the products in part of India's long-term investments in the Indian Institute of Technology (IIT). India's prowess has been most evident in the software sector, where world-class programmers operate in technology centers such as Bangalore, Chennai, Delhi, Hyderabad and Mumbai. Operating through satellite links, Indian programmers are providing IT support to U.S. and European firms in areas ranging from software development and maintenance, back-office operations, medical data transcription and transmission, telemarketing, and other related areas.

“The new technologies, especially information technology ...



India's biotechnology industry is set for dynamic growth in the coming years. In 2001, combining the health care products sector, the agricultural sector and the industrial sector, the country employed some 25,000 R&D scientists.



Biotechnology is another sector where opportunities for innovations in India are multifold. India is poised to make big contributions to the global healthcare industry and become a leading player in knowledge-based industries. This is based on its strengths and capabilities to be expeditious and cost effective in the development of products which is well supported by highly efficient and low cost manufacturing. Additionally, India is also emerging as a competitive base for several segments of the R&D value chain, especially in late discovery, pre-clinical, and clinical development. India's human resources comprising of a large English-speaking skill base of three million graduates, 700,000 postgraduates, and 1,500 PhDs qualified in bio-sciences and engineering each year were a huge advantage for India.

India's biotechnology industry is poised to record substantial growth. The industry, in 2001 comprised of 110 units in the healthcare products sector, 140 units in agri-

culture and about 300 units in industrial and other biotech products sector. Put together, all these units in 2001 employed roughly 25,000 R&D scientists. Bangalore, Hyderabad, Pune, Chennai and New Delhi are fast becoming the hubs of the biotech industry in India. Unlike in the Indian IT sector, where outsourcing is a major area of focus and growth, in the biotechnology sector, there are partnerships between Indian and foreign firms where both sides have their own areas of strengths and specialization.

Globally, India has been at the forefront of outsourcing arrangements ever since the process began in the mid-1980s. The four large companies that set up such arrangements with partners in India were Citibank (1986), Nortel Networks (1989), American Express (1990) and General Electric (1997). According to the World Investment Report, 2004, in 2001, India's share of the global market for offshore IT and IT-enabled

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services (ITES) was estimated at 25 percent, while for offshore ITES only, the figure was as high as 67 percent.

Several U.S. and European companies have located their back office operations in Bangalore, Chennai, Gurgaon, Hyderabad and Pune. Abundant supply of labor, low wages, cheap satellite communications and the Internet have been instrumental in the decision of foreign firms to establish their back office operations in India. Such operations create job opportunities in Indian cities and help lower costs for the foreign companies.

With the opening up of the Indian economy, the country's information technology industry has been the biggest beneficiary. Between 1995 and 2000, the Indian IT Industry recorded a compound annual growth rate of 42.4 percent. Software continues to contribute a major portion of the Indian IT industry's revenues. India's exports of computer software beat the global recession in 2001/02 (April-March) to grow by a healthy 31.4 percent. In absolute terms, software and services exports went up to \$7.87 billion in 2001-02 as against \$5.97 billion in 2000-01. According to the National Association of Software and Service Companies (NASSCOM) the Indian software and services industry is likely to earn revenues of \$20.5 billion during 2004-05. Of these, the export earnings are expected to be \$16.3 billion, an increase of 30 percent over last year's \$12.5 billion. The IT industry's contribution to the country's GDP has increased from approximately 1.4 percent in 1998-99 to more than three percent in 2003-04. The steady growth in exports of software is essentially a result of the export success stories of some of the large Indian IT companies who have also been penetrating the non-traditional markets like the EU, Australia, Japan and China, and the increased receivables from IT-enabled services like back office operations.

What is it then that makes India the number one destination for multinationals seeking to outsource any number of processes? In a survey that we conducted during 2004 for a study on Global Services Sourcing, we

found that MNCs went to India not merely to cut their costs, but also to access good quality services. Furthermore, over time, they continued to stay there for continued quality at competitive costs. The fact that India has been able to provide good quality services has distinguished it vastly from others, such as the Philippines, China, Singapore and Mexico, the other major countries sought by MNCs for outsourcing. As a consequence, India has earned a strong reputation on account of high quality services and many IT firms in India typically hold the necessary quality certifications.

There is increasing offshoring of upcoming service lines involving higher value-added activities, such as R&D, engineering and design, knowledge processing and logistics. Nortel Networks is the most striking example of a company that as early as 1989 set its sights on India in search for technical talent. Another advantage in India was that the time difference with North America allowed the possibility of doing R&D 24 hours a day.

Nortel set an ambitious target of increasing its turnover from \$6.1 billion in 1989 to \$20 billion by year 2000. To achieve this Nortel needed to expand its R&D capabilities for which it was looking to hire technically qualified personnel, but Nortel soon realized that a serious constraint was going to be the availability of scientific and technical manpower. In this backdrop, India provided the manpower Nortel was looking for. India was producing thousands of English-speaking graduates with solid engineering and programming credentials. In the process, Nortel found a large pool of programming talent that was not only available to be hired, but also for less than 30 percent of the cost of a North American engineer. Hence, the starting point for Nortel in India was not cost savings, but the need to access the best and the brightest skills. In the years ahead, many other companies followed suit and the move from outsourcing to innovation had begun.

Another case in point is that of General Electric. While GE Capital International Services (GECIS) started operations in India in 1997, since 2000, GE has also offshored R&D work to India. By leveraging the scientific talent pool of the country, GE has hired Indian scientists and engineers to work on R&D. According to NASSCOM, these are in areas, such as electronic and electrical systems technology, ceramics and metallurgy, catalysis and advanced chemistry, polymer science and new synthetic materials, and power electronics. It is noteworthy that GE's R&D India center in Bangalore has already filed for 18 patents in a matter of four years. ■