



An upbeat India beckons

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Key Insights:

- ▶ India's world-class talent in high-end research and design provides immense opportunities for multinational firms to address their globalization strategy.
- ▶ Public-private partnerships in physical and social infrastructure projects present a promise for faster economic growth.
- ▶ A steady transformation in manufacturing excellence is opening up possibilities for higher growth.
- ▶ The growth of India's consumer class offers an ideal platform for Japanese firms to leverage substantial strengths in capital infrastructure, electronics manufacturing, automotive, among others.

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Economic reforms and sound macroeconomic policies have ushered unprecedented development and momentum in the Indian economy, with a GDP growth rate of over 8%, emergence of Indian multinationals with global ambitions, and record foreign exchange reserves of approximately \$151 billion.

During 2005-06, India's total non-oil trade doubled from 2000-01 levels to \$150 billion, and exports recorded over \$100 billion with a growth rate of about 25%. The outlook is bright for most sectors. Traditional sectors such as engineering goods and textiles are witnessing extraordinary growth. Textile exports for 2005-06 stood at \$17 billion, a rise of over 26%, while exports of engineering goods grew at over 28% during the year¹. Exports of major industrial goods have been impressive, with over 40% growth in items like transport equipment, iron ore, and pharmaceuticals. A powerful manufacturing excellence is slowly, yet steadily emerging in India. In the last three years, 10 of the 17 winners of the Deming Application Award for quality were Indian firms.

How did India achieve all this? Since 1991, successive governments have pursued economic reforms of deregulation and liberalization in industry, foreign investment, Exim Policy, and exchange rate. Many core sectors that were once monopolies of the government have been privatized, for example, telecommunication, energy production/distribution, oil and natural gas, iron and steel, aviation, financial services, etc. The economic engine is strongly supported by an independent judicial system, a non-bearing administrative and statutory framework, transparent financial markets, and favorable tax structures.

To attract Foreign Direct Investment (FDI) and promote exports, the Government of India is aggressively pursuing Special Economic Zones

(SEZ), similar to the Chinese SEZs. There are 14 functional SEZs and 61 approved SEZs². These SEZs provide a business-friendly regulatory environment, modern infrastructure, and fiscal incentives like tax exemptions, total repatriation of profits, and 100% foreign ownership for setting up manufacturing facilities. India has also amended its laws for protection and enforcement of intellectual property rights to attract technology and FDI.

India is undertaking major infrastructural projects in roads, airports, energy, shipping yards, and metro-rail systems to stimulate economic activities and growth. Most of these sub-sectors have been opened-up for private sector and foreign investments.

A number of policies have been formulated to promote Information Technology (IT) and IT-enabled services (business and knowledge process outsourcing), manufacturing (textile, automobile, etc) and services (telecommunications, tourism, etc.). Trade organizations like Confederation of Indian Industry (CII), and National Association of Software and Services Companies (NASSCOM) work closely with the government to catalyze new initiatives. The "India Everywhere" campaign at the World Economic Forum at Davos, to raise awareness of the opportunities in India both from FDI and emerging market perspectives, reflects India's current philosophy.

How can foreign companies benefit? The opening of the Indian economy brings opportunities for foreign trade and investment in a number of sectors, including information and communication technologies, energy, chemicals, natural resources, textiles and metals. Global companies can benefit from India's large and skilled, yet comparatively low-cost human resources for the entire spectrum of activities – from knowledge-intensive R&D,

India is home to over a hundred R&D facilities of Fortune 500 firms.

design, and software services, to labor-intensive manufacturing activities. Already, over 50% of the Fortune 500 companies have at least some of their knowledge-intensive activities sourced in India.

Further, India's consumer market is growing rapidly. There are 60-70 million middle- and upper- income households in India with substantial buying power. Deregulation of the financial services industry and relaxed monetary guidelines have created favorable lending policies for housing and purchase of durable goods. A housing sector boom is taking place. The number of outstanding credit cards is nearing 54 million. All these have created a significant demand for automobiles, consumer electronics, refrigerators, microwaves, washing machines, personal computers, etc. Given that India still has low ownership levels of durable goods, the opportunities for growth are enormous. Take for example, the cell phone market. India now has 90 million cell phone subscribers, with the addition of a staggering 5 million new subscribers in March 2006 (See Figure 1 for comparison of mobile subscribers in China and India). In the next

couple of years, India will become the second largest market for cell phones in the world, behind China.

As India reaches the threshold of accelerated growth, there are lessons that it needs to learn from earlier success stories, notably Japan's postwar economic miracle.

Following Japan's Miraculous Growth

The Japanese economy grew 55-fold between 1946 and 1976, accounting for 10% of global economic activity with just 0.3% of the world's population³. Japan has continually evolved its technological capabilities, created new capabilities in sectors like biotechnology, aircraft and energy, and has excelled in trading, petrochemicals, precision machinery, automobiles, consumer electronics, and semiconductor industries.

Several factors appear to have influenced this growth. First, the free interaction of capital, resources, skilled labor, and markets. Second, the open trading environment under General Agreement on Tariffs and Trades (GATT). Third, technology support for its traditional and high-

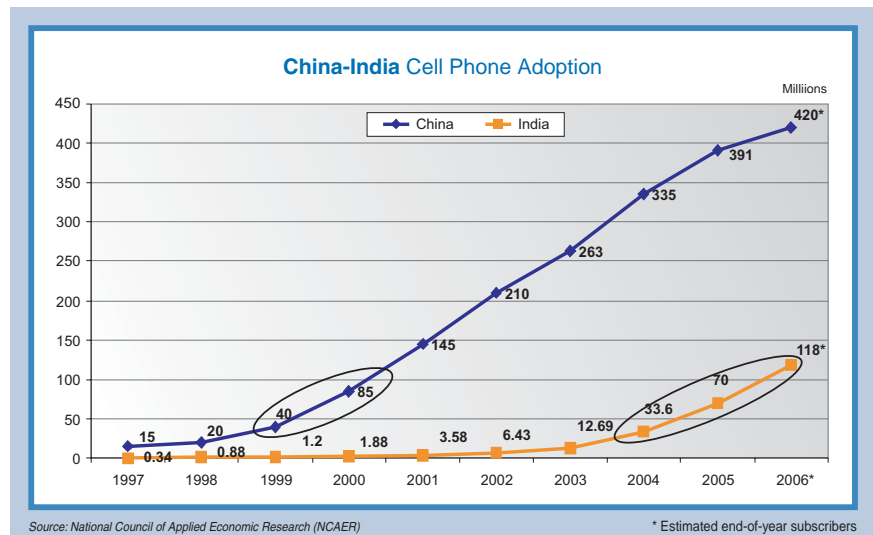


Figure 1 - Comparison of mobile subscribers in China and India

India has demonstrated its capabilities in high-end research and provides opportunities for Japanese firms to offset shortages in manpower for research.

growth industries, particularly from the United States. Fourth, massive investments in infrastructure, including roads, shipping yards, airports, power generating stations, etc. And finally, the Japanese government's critical role in centrally coordinating its industrial policy with industry and academia through the Ministry of International Trade and Industry (MITI) and the Japanese Development Bank.

The Japanese government, and MITI in particular, fostered common goals in collaboration with industry and academia, while retaining industry autonomy, competition, and free markets. Substantial resources were allocated for MITI to collect, analyze, monitor, and disseminate foreign technological innovations to industry/academia by setting up various centers/offices worldwide. They provided funding opportunities to channel R&D efforts and to develop technological capabilities in key industrial sectors. MITI facilitated technology diffusion and nurtured a culture of government-industry partnership to sustain comparative advantage through subsidies, R&D capabilities, and technology availability⁴. The Government of India has initiated a similar practice by creating an enabling environment and framework for maximizing private investment in basic infrastructure, education and public health through public-private partnerships.

What can be learnt from Japanese initiatives? Japanese manufacturing principles, processes, and know-how for competitiveness are important for India. Indian firms can learn from Japan's practices in quality and productivity. The confluence of expertise in cell-based, network, agile, and pull-based manufacturing, Total Quality Management (TQM), Quality Function Deployment (QFD), Just-in-Time (JIT), Kanban, Kaizen, and numerous

other concepts can be adopted to lower costs, improve quality and increase productivity. These remarkably simple, yet effective, techniques empower human resources by improving work culture, ethics, and discipline, which are often cited as reasons for Japan's economic success. India needs to emulate Japan in inculcating systematic methods to improve quality, such as those promoted by the Union of Japanese Scientists and Engineers (UJSE) in technical and management education.

A number of Indian firms like Sundaram Clayton Ltd., TVS, and Mahindra & Mahindra Limited have successfully incorporated Japanese techniques to continually improve quality and productivity.

What does India have in store? Japan can benefit from India's emergence into the global economy through FDI, trade, and technology exports. The number of Japanese companies in India has increased from 238 in 2003 to 328 in 2006, and Japan remains a major supplier of technology to India with 837 collaborations. However, Japan's trade and investment in India do not reflect the pace of growth of the Indian economy. While Financial Institution Investments (FII) inflow from Japan reached \$4.7 billion in 2005, Japan's total FDI in India from 1991 has been relatively low at only \$2.06 billion⁵. Japan's FDI to India peaked in 1997 and then declined between 1997 and 2003. FDI is on the rise again, with a significant jump to \$1.8 billion for 2005-2007⁶. But, 80% of the FDI is still limited to automotive and petrochemical sectors. Japanese firms have significant potential to explore other sectors in which they have technological advantages, such as consumer electronics, semiconductor, textiles, pharmaceuticals, biotechnology, metals, and other capital goods and equipment manufacturing.

Nearly 250 Indian centers engaged in teaching Japanese language and culture

Considering the growing Indian upper- and middle-income population, rising disposable incomes and the expanding market for consumer goods (14.3% growth in 2004-05), there are several potential sectors for investment.

Consumer electronics – the traditional strength of Japanese firms – is a promising industry. The number of personal computers in India, for instance, is expected to reach 80 million by 2010⁷ from the current 11 million. The market for audio and video systems is also witnessing impressive growth.

India's automotive sector grew at a healthy 13% in 2005-06 with total production nearing 10 million units including passenger cars, motorcycles, tractors, and commercial vehicles. The Japanese brand reputation for quality in this sector is unmatched: a number of wholly-owned subsidiaries and joint ventures like Maruti-Suzuki, Honda, Toyota, and Yamaha are household names in India. The potential for ancillary units and component manufacturing is enormous.

With increasing urbanization and pressure to create modern infrastructure, a number of Indian cities are exploring mass transit systems. Japan's engineering excellence, knowledge in urban transit systems, and capital can be effectively employed here. The state-of-the-art Delhi Metro Rail system was built with financial assistance from the Japan Bank for International Cooperation.

One of Japan's most significant workforce concerns of its aging population can be alleviated by shifting labor-intensive production to India, and moving the freed-up resources to knowledge- and technology-intensive fields (See Figure 2 on page 7). Strategically, Japanese firms may contain inflationary pressure resulting from labor shortage, while leveraging India as

an export base. For instance, Toyota-Kirloskar Auto Parts Private Ltd., in Bangalore exports 100% of the transmissions produced to Toyota's plants in the ASEAN economies⁸.

India is home to over a hundred R&D facilities of Fortune 500 firms. There are approximately 120 known top chip-design centers including those for Intel, AMD, Motorola, Texas Instruments, SanDisk, and Freescale. All major software companies such as Microsoft, Oracle, and SAP, are rapidly expanding design, development, and testing centers in India. GE's Jack Welch Research Center in Bangalore is one of its four R&D centers in the world. India has demonstrated its capabilities in high-end research and provides opportunities for Japanese firms to offset shortages in manpower for research.

India's comparative advantage in software services for business applications can also be exploited. Since software is an intermediate input to the creation of physical products (e.g. designing, controlling, testing) or is embedded in the product itself, Japan can leverage India's strength in software. There is a silent revolution going on in physical product reengineering where traditional products like automobiles, heavy engineering equipment, medical equipment, and other durable goods increasingly embed hardware and software⁹. Therefore, Japanese firms can benefit from India's expertise in embedded systems and software development expertise.

Indian firms have successfully adopted strategies to establish Japanese language proficiency and cultural affinity for building closer relationships. (See sidebar on Infosys Cultural Affinity program in page 6). In addition, there are nearly 250 Indian centers engaged in teaching Japanese language and culture¹⁰. This aligns well for Japanese firms that seek India's

Immersion Programs Break Down Cultural Barriers

To address the needs of the increasingly globalized business environment, Infosys Technologies Ltd. has introduced forward and reverse immersion programs for the Japanese market. These immersion programs allow Indian employees to become culturally acclimated to the Japanese work environment and provide Japanese employees the opportunity to be trained in the latest technology and processes, at the world class education facilities in Mysore. Infosys is also a consortium member of IJI - India-Japan Initiative, an initiative run by Toyota and Kirloskar. This initiative also imparts the nuances of the two cultures to the participants through workshops.

The Prime Ministers of Japan and India envisioned that regional cooperation among Asian countries can translate to an “Arc of Advantage and Prosperity” for stability, growth, prosperity and integration.

low-cost, skilled labor and attractive markets in their global strategy, as India emerges as a strong manufacturing base for automobiles, consumer electronic goods, and petrochemicals.

The Prime Minister of India, Dr. Manmohan Singh, has planned \$150 billion in infrastructure-related investments. This will further strengthen industrial activities and increase domestic and international trade. India is at the inflection point in growth and Japanese firms can significantly benefit from this upside potential.

Stimulating Regional Cooperation

Japan has been a long-term, trading partner for China and most East and Southeast Asian economies, through direct investments and cross-border trading. Japan has invested nearly

\$50 billion in FDI in China since 1978, and three times more in ASEAN countries, thus creating deep economic linkages and mutually beneficial trade relationships.

Today, the world is at the cusp of a dramatic shift in global economic power. Current growth rates suggest that China and India will join Japan to be among the top four economic powerhouses by 2025¹¹. With over 40% of the world's population, the time is opportune for these economies to consider exploiting geographic proximity along the lines of the European Union (EU) and North America Free Trade Agreement (NAFTA) for cooperation related to goods and services, economic and political stability, social/cultural exchanges, and security. Increasing cooperation among China, India and Japan may open a new dawn of prosperity and regional stability. The three countries can compete, yet benefit mutually from *complementary comparative advantages*.

Japan's advantages of high-end technology, superior manufacturing knowledge and practices, and capital can be a great importance to augment growth of other economies in the region. China's enormous market and manufacturing excellence, along with India's growing consumer market, significant natural resources, and software excellence can generate sustainable regional development. Complementary relationships have already been established among these countries. Many Indian software companies like Infosys have begun to offshore development facilities to China. Likewise, China is rapidly expanding into the Indian market with its global brands like Haier and TCL. Japanese automobile firms made their investments in India more than two decades ago.

Regional cooperation can be extended and consolidated through an economic community

that integrates Japan, China and India with existing regional forums like SAARC, ASEAN, etc. The Prime Ministers of Japan and India envisioned that regional cooperation among Asian countries can translate to an “Arc of Advantage and Prosperity” for stability, growth, prosperity and integration. As the economies of Asia increase their levels of trade and investments with each other, this would surely lead to greater prosperity and stability in the region.

- ¹ Source: Reserve Bank of India; <http://www.thehindubusinessline.com/2006/04/16/stories/2006041603240300.htm>
- ² Source: <http://sezindia.nic.in/>
- ³ C. Johnson, “MITI and the Japanese Miracle” Stanford University Press, CA 1982
- ⁴ C. Johnson, “MITI and the Japanese Miracle” Stanford University Press, CA 1982
- ⁵ Source: Ministry of Commerce and Industry, Government of India.
- ⁶ Source: http://www.in.emb-japan.go.jp/Japan-IndiaRelations/Active_Japan/Japan_Active_20_01_2006.htm
- ⁷ Source: Forrester Researcher; <http://us.rediff.com/money/2004/dec/15pc.htm>
- ⁸ Source: Embassy of Japan in India.
- ⁹ P. Konana and G. Ray, Physical product reengineering using embedded information technology, Forthcoming in Communications of the ACM.
- ¹⁰ Source: Ministry of Industry & Commerce, Government of India; <http://commerce.nic.in/annex-iv.htm#h1>
- ¹¹ Wilson and Purushothaman, (2003) Dreaming with BRICs: The Path to 2050; Goldman Sachs report.

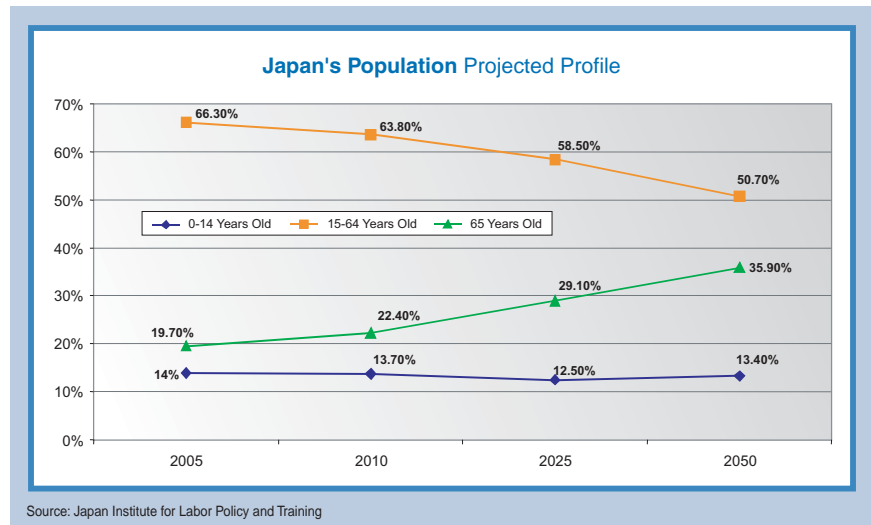


Figure 2 - Japan's Population Profile

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