Chazen Institute

The Jerome A. Chazen Institute
of International Business

COLUMBIA
BUSINESS
SCHOOL

Chazen International Study Tour Report

Building Physical and Human-Capital Infrastructure to Maintain and Manage India's Growth

Amina Runyan-Shefa MBA '06

John O'Brien MBA '06

Sponsored by The Heinz Dürr International Communications Fund

© 2006 by The Trustees of Columbia University in the City of New York. All rights reserved

A Note from the Authors

During three weeks from December 2005 to January 2006, 40 Columbia Business School students, faculty members and staff met with business, community and political leaders throughout India. As India is one of the top-two fastest-growing economies in the world, the country's growth—how to maintain, encourage and, in some ways, control it—was the predominant topic. During discussions with leaders, including Prime Minister Manmohan Singh and the executive director of Reliance Industries, a clear challenge emerged: in order for India to maintain its rapid pace of growth, it needs not only to develop its physical infrastructure but also to further develop its world-renowned human-capital infrastructure.

Chazen International Study Tours

Designed to enhance the classroom curriculum, Chazen International Study Tours offer students and their faculty adviser an intense, firsthand experience of the business culture of their chosen country or region. Study tours are initiated by students and organized with the help of the Jerome A. Chazen Institute of International Business. During study tours students meet with leading executives and government officials while visiting businesses, factories and cultural sites. Recent destinations include China, France, India, Japan, Russia and Scandinavia.

Summary

From Mumbai to Delhi, the promise of growth was on the lips of every government official, corporate executive and young, upwardly mobile worker with whom we met. Manmohan Singh, the prime minister of India, has articulated the view that India can achieve a sustained GDP growth rate of 7–8 percent per annum for the next 10 or 15 years.[1] During the Chazen Institute's recent study tour, new perspectives on what has to happen for that growth to be achieved were clear: better physical infrastructure and better human-capital infrastructure would be needed for the second-fastest-growing economy to deliver on its promise of growth to its people and the world.

With India famous for clogged roads and slow-moving highways, physical-infrastructure needs are clear. Nonetheless, basic human-capital-infrastructure needs are just as important. In order to create a skilled workforce for its new economy, India faces the challenge of creating a more pervasive basic education and healthcare infrastructure. The need for investment in human capital in India is largely unrecognized by the world; indeed, the West often sees India as a vast army of highly trained engineers and service professionals. With a view from inside the country—where engineers and back-office service providers seem just as scarce as fast highways and clean roads in Mumbai—however, it is clear that increased investment in human capital is not a luxury but a necessity.

Interdependence of Growth in India

Prime Minister Singh is well known not only for his current role and achievements but also as the former finance minister of India; he is often credited with recommending many of the economic reforms that have opened up the Indian economy. In our audience with Singh, he recited one key theme: his government's top priority is growth. He believes that it is possible to raise India's GDP growth rate from 7–7.5 percent to as high as 8–10 percent. With growth as the top priority for his government, most other policy reforms—from healthcare to education to urban planning—depend on and drive toward creating that sustained growth. He recognized and articulated the inter-dependence between growth and other key facets of the Indian economy. Population growth, higher rates of primary and secondary education and greater basic healthcare for the population will all be necessary in order to have a workforce to drive the growth of the economy.

On a visit to IBM Daksh, a renowned information technology (IT) services provider, developing a larger skilled workforce was a key focus of the business. IBM is depending

---

[1] Rajat K. Gupta, "India's Economic Agenda: An Interview with Manmohan Singh," *McKinsey Quarterly,* Special Edition: "Fulfilling India's Promise" (2005): 124.

on a population exceeding the country's 21 million professionals and 90 million college graduates in order for India's business and technology sector to develop to its fullest potential by 2010. At the same time, Singh and business leaders throughout India recognize that improvements in basic education and healthcare will only be possible if the economy continues to grow and create jobs for skilled workers. The interdependence between the educated workforce that will provide GDP growth and the GDP growth required to provide the social infrastructure necessary to create an educated workforce highlights the immense challenge that India faces, ones that most people with whom we spoke seemed confident the country could meet.

Physical-Infrastructure Development: Public-Private Partnerships Welcome

India is clearly in need of physical-infrastructure investment. Mumbai has the second-highest traffic congestion levels of any city in the world, and rapidly growing Delhi suburbs are in desperate need of better highways to connect workers to their jobs. Prime Minister Singh believes that an investment of $150 billion over the next eight years will be necessary[2] and that there are opportunities for public and private partnerships in constructing physical infrastructure. He is encouraging the private sector to participate in new ways: through an innovative bidding process for airport construction contracts and through a postmodernization effort in which formerly public sectors such as telecommunications and life insurance are being opened up to increasingly deregulated competition.

The deputy chairman of the Indian Planning Commission, Montek Singh Ahluwalia, also supported the idea of placing substantial portions of the public infrastructure in private hands. During a meeting at the Planning Commission's offices in Delhi, with the electricity flickering on and off at some moments, Commissioner Ahluwalia elaborated on some of the many infrastructure privatization plans that he is considering. He has even gone so far as to consider the possibility of privatizing a water distribution system.[3] Distribution is the key water supply issue in India;[4] only 84.9 percent of the urban population has access to clean drinking water, and an alarmingly low 78.4 percent of the rural population has access to clean drinking water. Providing potable water to the 200 million Indians who currently go without is a critical concern. By drawing the private sector into physical-infrastructure creation, Prime Minister Singh and Commissioner Ahluwalia hope to not only speed up that development but also add to the overall growth of the economy.

---

2 Ibid.
3 Vandana Shiva, "Privatization of Water in India Ignites Water Wars," http://www.organicconsumers.org/Politics/water071805.cfm.
4 United Nations Environment Programme, *State of India's Environment: A Quantitative Analysis,* Report no. 95EE52.

Private interest in acting as a partner in infrastructure development is also strong. Reliance Industries, a conglomerate with businesses in the textiles, petrochemicals, energy, power and telecom sectors, is eager to make the investments necessary to improve the infrastructure of India. With its business split between services and manufacturing, Reliance contributes approximately 3 percent to India's annual GDP.

Because of Reliance's many power- and transportation-related activities, the company has a particular interest in developing the physical infrastructure of India. One plan is to create a national gas grid that Reliance would wholly or partially own and operate to exploit the massive resources of natural gas that it recently discovered off the coast of India. Shri Nikhil R. Meswani, executive director of Reliance Industries Limited with overall responsibility for the entire Petrochemicals Division, echoed some of the same themes that Prime Minister Singh had noted. But, Meswani cautioned that, in his view, these opportunities to make substantial investments in infrastructure would exist for two years. "After two years, that opportunity will be lost."

Human-Capital-Infrastructure Development: Public and Private Views Differ

While listing numerous ways in which private companies would be invited to participate in physical capital infrastructure development, Singh noted that the ultimate responsibility for the development of the Indian people and their human-capital infrastructure is held by the government—and his leadership—alone. "The role of a leader like me is to prepare people for change, to plan for change and to make sure that that change is least burdensome on those least prepared for it," remarked Singh when reflecting upon some of his challenges as a leader in this increasingly fast-paced time of change and growth for India as a nation.

Private corporations do see a role for themselves, however, and are hoping that the government will see them as partners in developing human-capital infrastructure. During a visit to Birla Sun Life, one of the 14 life insurers in the Indian market, it became clear that developing the Indian lower-middle and middle class is just as important to the company as to the prime minister and planning commissioner. With a middle class of 250–350 million people, India seemingly has a large market for life insurance. However, only 90 million of those in the middle class have any sort of insurance, and most of them are underinsured.[5] Nationalization of the industry in 1956, followed by only modest deregulation, created an underdeveloped market in which the government life insurance provider still maintains dominance. With low levels of life insurance, the middle class has a low level of financial security. "If we had a choice, we would not

[5] "Underinsured" refers to life insurance policies that have a payout not large enough to cover funeral expenses or equal to one year of the deceased's former compensation.

compete with the government in this sector," said Nani Javeri, executive director of Birla Sun. As long as the life insurance sector continues to include relic government entities, competitive life insurance providers will likely stay away from the Indian middle class, and the life insurance penetration levels will stay at their currently low level of only 2.9 percent of the population.[6] With 55 percent of the current Indian population below the age of 35, the life insurance sector is not only primed to take off but also poised to provide a social safety net to a burgeoning middle class. The Indian government has an opportunity to view private corporations as partners in creating a safety-net infrastructure for the population.

Drivers of Growth

Foreign Direct Investment

With Indian executives, planners and politicians hoping to produce sustained growth of 8–10 percent, the country is also looking outside itself—to foreign direct investment (FDI)—for some of the resources that will fuel this growth. In the government, this gaze toward foreign dollars has been clear for over a decade. As minister of finance in the 1990s, current prime minister Singh was responsible for relaxing limitations on FDI and encouraging multinationals to invest in India.

The interest—and enthusiasm and hope for—FDI is clear on the private side of the Indian economy as well. Meswani of Reliance sees FDI leading directly to 2 percent of GDP growth over the next five years through increased investment of $25–30 billion in oil infrastructure and a $50 billion investment in a nuclear power plant. He also sees FDI as a necessary component for Reliance's new business development opportunities, which may increase the retail and consumer infrastructure of the economy; Reliance hopes to develop a retail network of gas stations throughout the country's highway system. Finally, Meswani is proud of India and Reliance's current and historical success with FDI. He points to India's past encouragement of FDI as the real driver of its growth to date. "India encouraged FDIs and hoped that their momentum would push change, and that is what has happened in many ways." He is also proud of Reliance's 24 percent foreign shareholder base, as it signals India's and Reliance's investment opportunities globally.

A meeting with Warburg Pincus, a large private equity investor in India, bore the same message: there are opportunities for private ownership of major infrastructure projects, such as ports and roads,[7] but with the 26 percent constraint on foreign

[6] The world average for life insurance penetration is 8.1 percent, and the average in Asia is more than double that of India at 7.5 percent.
[7] Manjeet Kripalani, "Private Equity Pours into India," *Business Week,* June 20, 2005, http://www.businessweek.com/magazine/content/05_25/b3938158_mz035.htm.

ownership of Indian firms, the opportunities for private equity shops like Warburg may be limited to venture capital–like roles in infrastructure deals in which Warburg exerts limited control. While Warburg indicated that it is exploring such possibilities, it emphasized that with limited control foreign investors are reluctant to invest in infrastructure projects and potential growth is slowed.

New Technology

Inside India, technology remains a driving force behind economic development. From the IT services call centers of IBM Daksh to the widespread cellular and wireless service networks of Reliance in even the most remote villages on the Indian landscape, it was clear that technology is exacting quick change and driving growth for every sector of the economy.

In the private sector, new technology and innovation is seen not only as a growth driver of the economy but also as an essential component for both physical and human-capital-infrastructure development. Meswani of Reliance sees substantial growth opportunities for India through agricultural deregulation and the benefits of technology. According to Meswani, Indian farmers use “technology from the 1960s” and could benefit from such technical innovations as the dissemination of pricing information of agricultural exports via the new wired-telecommunications infrastructure available in the cities and towns throughout the country. Agriculture currently accounts for 20 percent of India’s GDP and employs 60 percent of the population.[8] Meswani believes that through better information and an increased use of modern farming methods farming can contribute substantially to GDP growth. For agriculture, new wireless technologies could make information infrastructure improvements essential for keeping Indian farmers competitive.

At Nicholas Piramal, a pharmaceutical, textiles, engineering and retail real estate conglomerate with revenues of U.S.$330 million (INR 13.9 billion) in 2003–04, technological advances in pharmaceutical development processes are seen as essential to the growth of its No. 3–ranked (in terms of revenues) pharmaceutical business in India and to the growth in healthcare coverage for the Indian population. Dr. Swati Piramal, director of strategic alliances and communications and board member, has put forth an innovative challenge that her company—and a cooperative of companies throughout the pharma-ceutical industry—is now working toward. “We need to develop a drug for only $50 million dollars, develop the process to do that, as opposed to the $1 billion average drug development costs currently for the industry. Countries like India, and countries throughout Africa, cannot afford a $1 billion drug. But we can afford a $50 million drug. We need that sort of innovation—a new paradigm—and we’re on track

[8] CIA, *The World Factbook,* http://www.cia.gov/cia/publications/factbook/geos/in.html.

to do it.” With new advances in pharmaceutical technologies and processes, Piramal sees not only greater basic healthcare throughout India but also tremendous growth for the newly patent-oriented Indian pharmaceutical sector.

Conclusion

With great enthusiasm and national pride, leaders in Indian government and industry look toward and depend on continued high levels of growth for their economy. At the same time, they recognize that the bases of this growth are the two factors of the Indian landscape that they also hope to change the most: India’s physical and human-capital infrastructure. They look toward exacting change on these two types of infrastructure both as an end and a means to that end. They also look to continued advances in foreign direct investment and technological innovations to support their path to growth.