



*Express economic gains
demand infrastructure investment*

ONLY IN INDIA

BY CANDI S. CROSS

INDIA MADE A STRONG ALLIANCE IN THE BATTLE FOR economic growth when JP Morgan Chase & Co., the third largest U.S. bank, set up a \$2 billion fund focusing on infrastructure investments. The initiative spawned a series of committed investments to the “Look East” prospectus, which thrusts Prime Minister Manmohan Singh’s well-publicized price tag of \$150 billion into the limelight. With or without

ongoing economic development campaigns in the United States, Thailand, and Singapore, spending on India’s roads, ports, and power from the cities of Chennai and New Delhi to Darjeeling and Calcutta may triple over the next five years.

Improvements can’t happen soon enough for Hyundai Motor, Nokia, Dell, SemIndia, and the other companies that aligned early on with India to move its manufacturing

only in india



Photos courtesy: HOK

A new terminal at Indira Gandhi International Airport will include 55 new aircraft stands and two floor levels to accommodate arriving passengers separately from departing passengers.



capabilities forward.

Despite economic development resulting from the U.S. outsourcing proliferation that added approximately 400,000 customer service and information technology jobs in the country, India faces destabilizing problems: significant overpopulation, environmental degradation, extensive poverty, and ethnic and religious strife. An additional and highly visible problem, deficient infrastructure has been industry's greatest roadblock in its passage to India.

Deloitte Touche Tohmatsu estimates that companies must tack up to 5 percent onto the costs of doing business in India due to well-worn infrastructure. Frequent power outages, bad roads, and packed ports have forced manufacturers to accelerate production by 10 days as a buffer to shipping delays throughout the country.

IIE member Jamshed Modi, Ph.D., a professor of operations management at the SP Jain Institute of Management & Research in Bombay, points out that like every other country,

India holds both opportunities and shortcomings as a result of its geography.

“I think India’s infrastructure already has and will continue to be a huge drag on its development, and it is not likely to surpass China in the foreseeable future, certainly not within three to five years,” said Modi. “Ultimately, national development is dependent on national character, and as long as India’s governing bodies (the central parliament, the state legislatures, the city municipalities, and on down) continue to have the large percentage of poorly educated, unprincipled, and even under-trial representatives that they do, infrastructure and general development will be slow.”

Today’s story

Speed does enable profit in supply chains. If painful delays continue to be compounded by lenient traffic rules along one of the largest road networks in the world, will Hyundai Motor India carry forth with plans to expand its dealer network and raise its production capacity to 600,000 automobiles? Can businesses hold on another 12 years for the Golden Quadrilateral highway to reach its 40,000th mile? Will six- to 10-hour power outages still be common after the construction cranes have left?

Ram Kolluri, CEO of Global Investment Management, insists that the “modern story” of India is very real, exciting, and full of advantages. He focuses on core bounties that the country offers rather than the pitfalls he dismisses as “old views” of India. Gains include a viable railway system in which 10,000-plus trains are built each day, democracy, and tremendous education opportunities.

“India has poured money into education since its independence. You could have gone to college and not even paid \$10 to get a professional engineering degree. In the last 50 years, the country produced a world-class engineering, science, and mathematical pool,” said Kolluri, who settled in the United States 25 years ago as a financial planner. He travels to India each year for business as a certified accountant.

“Add the English language. All advanced education was in English. You now have a very powerful balance of talent and pro-business acumen. Half of the population [500 million] is under 25 years old. This is the youngest population in the world, so there is no shortage of labor pool.”

Recently, students took up the cause with the bustling city of Mumbai as their focal point. At an event organized by the National Institute of Industrial Engineering, management students brainstormed how the city of more than 15 million people could, given its host of infrastructure and sanitation problems, achieve the goal of becoming an internationally

According to the Indian Institute of Materials Management, the dynamics of a supply chain in a developing nation are dependent on a dozen factors:

- Efficient distribution of power, communications, and transportation
- Macro-level support from government
- Purchasing power of customers
- Industrial climate
- Availability of technology
- Quality of labor and management
- Security of systems and normal law and order situation
- Global outlook
- Corruption-free environment
- Healthy and hygienic environment
- Bureaucratic barriers and hassle-free systems and procedures
- Customer satisfaction

renowned urban center. Students had suggestions: appoint a CEO of Mumbai, reclaim land from the sea, use waterways to ferry commuters, use video conferencing to avoid transportation costs, and designate economic zones throughout the city.

Throughout Mumbai, mega-development projects vie for attention. The roads that line the city are responsible for the transport of more than four-fifths of the world’s goods, with engineering materials, chemicals, and gems and jewelry the fastest-growing sectors.

“Today, you have a powerful working population. The biggest story is the middle class. Ten years ago, the average income for a family was \$3,000; today, the average is \$10,000. You have a middle class that is hungry for consumer products, hungry for education; it’s a consumer boom that will last 20, 30, 40 years,” said Kolluri.

“Not long ago, we hardly had 2 million telephone lines; now we have 300 million. Even people who are laborers on the land selling vegetables, caddying vegetables over their heads, have a cell phone. You can make a call to the United States for five cents a minute. You cannot do that in the States. The penetration of the Internet is also an incredible velocity in business matters. Overpopulation and poverty are old views of India,”

∴ LAST CALL? ∴

Outsourcing to India used to conjure up images of mammoth call centers filled with employees studying the latest football scores or watching *Entertainment Tonight* to catch up on mainstream America's pastimes. After all, small talk can go a long way. Just two or three years ago, more than 500,000 customer service reps replaced names like "Farid" with "Fred" in the interest of addressing questions from 8,000 miles away. Citibank, General Electric, and Hewlett-Packard were among the first U.S.-based companies to outsource entire customer service departments.

Another slice of American pie that's getting distributed to South Asia is manufacturing service. If it can be eaten, worn, used, or driven, chances are that it is being made in India or China these days.

"The country has been evolving as a manufacturing sector, perhaps people are just taking notice now,"

said Thomas Stringer, director of business incentives advisory at Duff and Phelps, a provider of independent banking services. "In a start-up to holiday sales, you can't be having toys that are killing kids. ... That's going to call for a change; titanic proportions would be an understatement.

"In India, you have tighter control from a legal standpoint. There's a strong attorney class and judicial sect that has been historically well regarded. India has a common political heritage from the British system, and it's very stable from an economic standpoint. It's an evolving market; it's much higher in the food chain than people think."

But India's food regulatory processes could be improved. In the first half of 2007, according to the U.S. Food and Drug Administration, 1,763 food exports were banned from entering the United States. Black pepper and shrimp contaminated with salmonella, coconut with listeria, fruit with

carcinogenic attributes, and guar gum with unsafe dioxin levels gave India the worst track record in food exports than any other country.

While economic gains build a solid foundation for a more complete switchover from calls centers to factories and distribution centers, will India live up to its reserved address as the world's manufacturing control tower? Will gleaming highways and bridges detract from investments in quality, safety, security?

"Many businesses from India will invest in the U.S. definitively with a greater depth of the investments. It's becoming a two-way street, particularly in the pharmaceutical manufacturing industry," said Stringer. "Having a strong regulatory and enforcement policy goes a long way."

With over 20,000 pharmaceutical manufacturers registered in India, industrialization will not be the only measurement of performance or policy.

he said.

More relevant views of the country would include the following facts: India's population grows by 1,815 people every hour, and more people live in India than all the residents of North America, South America, and Australia combined.

Modern movement

To meet the demands of consumerism, transportation companies abound.

Third-party logistics providers are familiar with the varied landscapes of India that give credence to its reputation as a "subcontinent." In parts of the north, 3PL workers share transport routes with tractors, wild sheep, and musk deer ambling alongside vegetable carts. The 1,568-mile Ganges River, running along the Himalayans, supports more than 100 cities and

countless villages in intimate religious rituals, drinking water, and farming provisions. In everyday business conventions, the river also functions as an energy source and chemical waste ground for the leather industry, which accounts for approximately 2.5 million employees in India.

In conjunction with Penske Logistics, Robert Lieb, Ph.D., professor of supply chain management at Northeastern University, conducted a survey of CEOs from more than 40 of the world's largest 3PL providers to study trends across three regions: North America, Europe, and Asia-Pacific.

"Six of the CEOs indicated that their companies have established 3PL services in India. The business press has often focused upon India's lack of a modern transportation infrastructure as something that might limit future economic growth," said Lieb. "The CEOs were asked if that issue has caused any

significant problems in the operations in India, and interestingly, only one of the six who responded to the question indicated that it had.”

Typical problems were cited: congestion, toll road blocks, and faulty distribution structures.

“When you bring the level of activity predicted — 12 percent or so of increased production growth — you’re going to see really serious problems such as highway congestion around the ports in particular,” said Lieb. “If you’re trying to run a lean manufacturing operation, you will back up your production process with a lot of safety stock, which will make operating costs go up. In many cities, when production volume goes up, you have several hours every day of gridlock.

“When you talk to companies operating in China for a good while, they will tell you that politics vary from being a minor annoyance to a major impediment. Doing business day to day, after a while if you have opportunities in other places without these issues, you will eventually go to them.”

According to Inbound Logistics, China’s investment in infrastructure has been eight times that of India, and the lead-times for India’s exports to China range from six to 12 weeks while the same export category from China to the United States is two to three weeks. The cargo transport expense in India is among the highest in the world at 11 percent compared to the global average of 6 percent.

C.P. Jhamb, project director for the Nuclear Power Corp. of India Ltd., further suggests that movement delays in the transport of goods such as medical supplies shouldn’t exist at all.

“The issues of timing, care, and safety can cause nightmares when small but high-value consignments of life-saving medical supplies, other highly perishable items, and items with expiration date restrictions are not delivered in time either due to transportation problems or improper handling and procedural delays at the port of clearance,” said Jhamb. “As such, the quality of infrastructure is important for such critical and time-bound deliveries. The logistics firms which offer supply chain services for transportation, storage, distribution, packaging, temperature-controlled storage facilities, tracking, and service support cannot afford any goof-ups in such cases.”

More than 50 development projects are listed with the Indian Ports Association concerning construction of port connectivity routes, ship repair facilities, container terminals, crude oil-handling facilities, and parking lots along harbors. Anticipating at least half of the projects due for completion in the first earnings quarter, the Association has called for more electronic data interchange between supply chain parties to accelerate goods movement during heightened construction and prepare for greater port traffic in the years to come. All major

ON THE WEB

ANCIENT ECO-TRADITIONS

The Airports Authority of India selected plans from a team of architects that will transform Chennai International Airport’s domestic and international terminals into the greenest airport in the country. Blueprints incorporate a \$3 million facility structure that will accommodate twice the number of passengers by 2010. Centuries-old construction traditions that synchronize with nature aim to add more credibility to the country’s infrastructure.

www.iienet.org/magazine/jan08/traditions

ports in India were to have switched to paperless transactions within one community portal by the start of 2008.

Academia and industry are championing India’s turning point and closely watching development.

“IE can help, and a few progressive organizations are employing IE for precisely this purpose,” said Modi. “I think we as an institute [IIE] should form a group or committee to evolve initiatives whereby our Institute and the vast body of knowledge that we call our domain may be of help to specific corporations in the public and private sector who are working to improve the infrastructure or to optimize their operations under the infrastructure we have at the moment.”

SemIndia, one of the country’s largest semi-conductor manufacturers, advocates technology to empower the country to move beyond its infrastructure woes. The company has been instrumental in bringing down the price of semiconductor products so that more Indians can afford computing and broadband communication.

SemIndia’s mission statement reflects the spirit: “India is at the inflection point of an explosion in the domestic consumption of electronics goods and embedded systems. SemIndia is poised to embark on a journey that will result in the establishment of the most advanced ecosystem for electronics and semi-conductor production and associated infrastructure, logistics and distribution systems in India. This ecosystem will serve not only the domestic market but will also make India a global player in the export market creating a new and vibrant semi-conductor industry in India that will result in the creation of millions of new high technology and related jobs.” ❖