India Adopts 'Chinese Model' —With Some Variations

by Ramtanu Maitra

President George Bush is set to visit India for three days, March 1-3, and will endorse India's economic and technological "successes." But just as in his Presidential trips to China, the visit is organized so that Bush will not have the opportunity to see the sea of desperate poverty that is still growing throughout vast stretches of India.

In contrast to this hidden poverty, in recent years, volumes have been written about India's high rate of economic growth, which is now about to match the rate that Beijing has boasted about for almost a decade. In the same vein, a Feb. 21 report of the International Monetary Fund (IMF) pointed out the rewards the Indian economy is reaping because of the "reforms" it has undergone over the last decade. "If opened up further," the still not contented IMF claims, "the Indian economy could achieve sustained growth of 8-10 percent."

The IMF report continued: "Notwithstanding high world oil prices and a weak monsoon, the economy showed remarkable resilience in 2004-05, with growth (at 7.5 percent) remaining robust and becoming broader-based." The report then praised the Manmohan Singh-led United Progressive Alliance (UPA) government for achieving the success.

It is widely acknowledged that most of India's rapid economic growth has come from following what is commonly known as the China model. That model is based on manufacturing products which are not consumed by the local population, but which meet the demands of the consuming nations of West and East.

There is no doubt that India has adopted this very policy. In addition, the growth of computer software technology in India, for which the country is recognized worldwide, has come about not because this technology could be used effectively to "wipe the tears off of every Indian's eyes" —as one of India's greatest sons, Mahatma Gandhi, had aspired—but because it would generate foreign exchange reserves, which would then allow India "some day" to deal with the poor. In other words, like the Chinese leaders who launched the China model of economic development to make China "big and strong," New Delhi is ignoring hundreds of millions of poor, and "maximizing profit" by handing out higher pay to a handful of educated and skilled personnel.

Nevertheless, the present Indian government has no compunction about promoting this inane report by a failed institution as yet another acclamation of India's economic success. In reality, there exists very little difference between the IMF's prescribed economic development programs, the China model of development, or the thinking that has come to prevail not only within the powers-that-be in India, but also among a significant section of India's non-poor population.

Only weeks before the IMF paid its glowing tribute to India's recent economic achievements, the nation's first Social Development Report was released. This report, which drew scant attention because it got so close to the truth, contradicted the popular image of India's economic achievements. The report pointed out that 26% of Indians, or about 260 million people, are living in dire poverty (193 million in rural areas and 67 million in urban areas). Some observers, however, claim the real figure may be as high as 400 million. But without quibbling about the exact numbers, it is amazing that 260 million people—almost twice the population of Japan—continue to live in dire poverty in India, while the world unreservedly cheers India's economic success.

What Is at Stake

There is no question that India's growth is real, and not a concoction of figures and numbers. But the beneficiaries of this growth are a small segment of educated and skilled personnel. One of the reasons that India has always been considered as a country with an immense economic potential, is that

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While the IMF cheers the goods-exporting Indian economy, at least 260 million Indians, mostly rural, still live in abject poverty, and the government has no real plan for the massive infrastructure building necessary to change the situation. Here, women harvest rice.

since its independence in 1947, broadly speaking, India has achieved remarkable success in three crucial areas. The first is its hard-earned success in becoming a food-surplus nation. This required vast investments in the agriculture sector in the 1970s. Those investments, in essence, have paved the way for food independence for a billion-plus people, and helped the country to develop expertise in other areas.

Unfortunately, having achieved successes in the agricultural sector, subsequent governments have viewed the sector as a place where a large number of unskilled people can be kept "imprisoned." These unwanted stepchildren are given handouts from time to time to allow the local politicians to justify to the poor how New Delhi has a "genuine" interest in their welfare. The latest of such handouts was announced on Feb. 1, when the Indian government said that it was ready to launch the National Rural Guarantee Scheme, touted as one of "the country's most ambitious efforts to tackle rural poverty." Under this program, one member from each of India's 60 million rural households is guaranteed 100 days of work each year.

The National Rural Guarantee Scheme says each family will receive a minimum wage of 60 rupees ($1.35) per day, or an unemployment allowance if there is no work. It is evident from this that the government endorses starvation for these families for the other 265 days a year. Every Indian knows that a $1.35 handout per day, even in a country with cheap wages and a very low cost of living, would leave families looking for extra income elsewhere to survive. Because of sheer neglect of the vast rural population—50% or more of India's workforce is still tied to the agricultural sector—and the unwillingness of one government after another to utilize this massive rural manpower to remove India's poverty, millions of people are leaving the rural areas and becoming droplets in the growing sea of urban poor.

The second success achieved by independent India was in some of the front-line areas of technology, particularly in nuclear and space technologies. India's nuclear energy development program, which made the most effective use of Eisenhower's "Atoms for Peace" initiatives in the 1950s to train its scientists and engineers, later came under serious attacks from the rabid careerist and nonproliferation geostrategist bureaucrats of the West. Nonetheless, against all odds, India built a solid foundation in the atomic energy sector in the 1960s, under the leadership of India's premier atomic scientist, Dr. Homi Bhabha.

The nuclear program was based on three phases of development. India's first-generation reactors were based on natural uranium as fuel and heavy water as the moderator. But since India has very small reserves of uranium, the second phase entailed building larger fast breeder reactors which, in addition to generating electrical power, would generate plutonium for charging third-generation reactors. The third-generation reactors would run on thorium as fuel with heavy water as a moderator. (Thorium fuel requires a jump-start to begin the fission process.)

India has vast reserves of thorium, close to 300,000 tons, and the thorium-fueled reactors were planned by Dr. Bhabha to be India's major source of electricity. In the interim, as India's long-term energy program had envisioned, the nation would have to burn coal, dam the rivers to generate hydropower, and use the natural-uranium-fueled heavy-water reactors to meet its growing power requirements.

Because of India's s active development of nuclear weapons as a part of the nation's defense, during a period when the Cold War animosities had proliferated nuclear weapons worldwide, India encountered total technology sanctions from the developed nations. As a result, India's nuclear technology development program fell way behind. But after years of independent efforts, India is now close to the startup of the first of a series of fast breeder reactors that would generate plutonium for future thorium-fueled reactors. India has achieved the distinction of developing the first thorium-fueled reactor, and the country is firmly in a position to go for a nuclear-power-based energy development program, if the leadership sees it as a necessary means to eradicate poverty.

The third part of India's success goes hand-in-hand with

its success in space and nuclear technologies. From the very outset, after independence, India's thrust was to develop a large and strong scientific and technological cadre. Engineering colleges, colleges training students with basic sciences, and medical colleges were established in large numbers, and these were funded by the government to develop the personnel to serve India's future industrial and technological sectors.

Growth at Any Cost

With these three basic ingredients in place, it is only natural to expect that India would concentrate on undoing what the British colonial rule had inflicted on India over its 200 years of rule: the generation of a sea of poor and destitute. But instead of focussing on the removal of poverty, and providing these hundreds of millions a decent future, which should have been the only goal of New Delhi, the powers-that-be dedicated themselves to a single item in their agenda: the generation of a high rate of GDP growth.

New Delhi claims—and so does the IMF—that a sustained high growth rate would allow some wealth to trickle down, to ease the pain of millions of poor, and that the government can do nothing better. Left unsaid is that the able and skilled, functioning in a perfect Darwinian surrounding, would generate more wealth and get richer, while the disparity within the Indian population would grow. It is known that China, with a totalitarian method of rule, can cope with such economic disparity within its own population, but it is not clear whether the Indian leaders are aware that such growing disparity between the haves and have-nots cannot be dealt with by the same means used by the leaders of China.

Where both the Chinese and the Indian leaders agree, is that the economic development of their respective countries has nothing to do with removal, or non-removal, of poverty. In their view, both India and China can be mighty nations, while a large chunk of the population is sinking in a sea of poverty. All that really matters, is possession of hundreds of billions of U.S. dollars in foreign-exchange reserves.

Some Indians rightly point out that China's opening up of its economy started with the establishment of special economic zones (SEZ), which allowed foreign investors 100% ownership, offered low tax rates and the freedom to hire and fire workers, and provided good infrastructure. India has not done such things, and it is likely that New Delhi will not be able to muster enough political strength in the near future to push such tough measures.

Those who are concerned about the developmental model India has adopted, make the point that India has done a particularly "poor job" in not being able to absorb its labor force into productive employment. Between 1993-94 and 1999-2000, for example, the economy grew 6.5% a year, but employment grew just 1%. These critics point out that employment in organized manufacturing has remained stagnant at about 6 million, or 1.5% of the labor force. The much-vaunted information-technology sector employs just 1 million—a tiny drop in the Indian Ocean. But despite all this, some of these critics blame India's restrictive labor regulations. They claim that if India adopted a "hire and fire" approach, it would enhance competitiveness and productivity.

Then, there are a large number of apologists. For instance, one hears often in New Delhi that it would be incorrect to say that all of India's poverty reduction programs have failed. The growth of the middle class, which these apologists wrongly claim was virtually nonexistent when India became a free nation in August 1947, indicates that economic prosperity has indeed been very impressive in India, but that economic development has been very uneven, they say.

Others point out that the main causes of poverty are illiteracy, a population growth rate that has greatly exceeded the economic growth rate for the better part of the past 50 years, and protectionist policies pursued from 1947 to 1991, which prevented large amounts of foreign investment in the country. They claim that poverty alleviation is expected to make better progress in the next 50 years than in the past, as a trickle-down effect of the growing middle class.

Finally, this faction concludes, eradication of poverty can only be a very long-term goal in India. During this long period, they argue, India's best and most skilled must keep on providing the back-up service to manufacture products which the consumerist West needs and demands. The products may, or may not, have any relevance for the citizens of India, but the manufacturing of these products should be kept up and expedited.

Since the West's consumer appetite can never be satiated, New Delhi claims that the West's consumption of "things" would allow India to build up a huge foreign-exchange reserve, which, in turn, would allow India to alleviate poverty. There is no timeframe, there is no national commitment to remove poverty, and the entire economic policy is based on a fantastic assumption. In essence, this is the Indian endorsement of the China model.

Bad Habits Learned From the British

Since the British took control of India, the country, which already had caste divisions, was subjected to a new type of disparity. British colonials were interested in India, in addition to some geopolitical reasons, in order to rape its resources. They looked at India as an agrarian nation that could produce enough food to feed the British troops stationed all over the world, wherever Britain had its colonies. They also found the country rich with natural resources, such as coal, copper, zinc, silver, gold, and so on. The British had to loot these, and they did so using intensive manual labor. While the British workers got some benefit from the industrial revolution of the 1800s in Europe, the Indian laborers got none.

But because Britain is a small nation and India is a large landmass, the colonials could only afford to provide a handful of their people to monitor and control things in India, backed by the protection of an army. So, beyond taking the food items

and mineral reserves, Britain also required a set of "*babus,*" who would take care of these products, collecting and shipping them all over the world, including to England.

The process created a section of the Indian population who got English-language education, went to Oxford and Cambridge universities, and became wealthy. These people owed everything they had to the British Raj and, in essence, developed a similar kind of contempt for the rural poor that the British had. The contempt of the *babus,* however, was not as venal as that of the British. It was more like feeling sorry for the "poor sods."

In post-independence India, this *babu* "tradition" continued. More people learned the English language, got an education in English, and aspired to become a part of the West. They were not poor, even if they were not wealthy. They were educated, and many of them were highly skilled. To these individuals and families, the utter poverty of India's millions was no more than an embarrassment. They were eager to prove to the Westerners that the Indians were as good as they were, but the poverty in India was always an embarrassment.

Under the circumstances, one might assume, these sons and daughters of *babus* would divert their attention and work to remove poverty. But they did not. They found the size of the poverty insurmountable, and they themselves were qualified enough to do well financially. They sympathized with the poor, but chose to ignore poverty.

Now, in the post-reform days, a new phenomenon has emerged. India's skilled class has been recognized, and the World Trade Organization-led globalization process has allowed the Western nations to use these skilled people at a minimal cost. Indians, in addition to their skills, were liked because Indian wages are low. The so-called outsourcing poured into India, and a section of skilled and educated Indians began earning what they could not otherwise. There is no question that many new jobs will be opened up because of a fresh burst of outsourcing in new areas—but how long will that last?

The most disturbing aspect of it all is not that the educated and skilled Indians are getting a part of what they deserved all along, but that they are getting it because Indian wages are low. Indian wages are low because a large pool of service-sector people, who sell basic amenities such as vegetables and other food products, among other things, do not have to spend a penny of their income for infrastructure. For them, infrastructure does not exist. They do not pay a water tax, because they do not get running water; they do not pay for electricity, because they do not have it. They do not pay a road tax, income tax, sales tax, land tax, or house tax. They do not pay these taxes, because they do not have any access to those amenities, or they do not qualify.

So, riding on the backs of these poor, Indian wages have remained low, and a section of people has derived benefits from that new game to maximize profit called, outsourcing. In other words, there is a high value for many in India now to maintain poverty. Poverty in large scale would ensure a supply of cheap goods and keep the cost of living low.

Because New Delhi adopted this policy, and has not attacked poverty as its main goal, the government has succeeded in developing in recent years "oases of comfort" and "pockets of glitter." Once in a while these "pockets of glitter" reflect light, giving the impression that India is shining. But this is far from the truth.

Building Infrastructure and Nuclear Reactors

The elimination of poverty in India is the same as nation-building. To begin with, rural India requires quality education and basic health care. Quality education means making sure literate young individuals join the workforce, while an adequate health-care system would ensure each and every individual protection from common diseases such as cholera, tuberculosis, and so on, through a decent health infrastructure system.

Needless to say, rural India's basic infrastructure is crying out for help. From time to time, noises are made in the power corridors of Delhi saying that this remains a priority. But such outbursts were extinguished quickly by the threat of the "cost involved" in achieving this.

For instance, India's Finance Minister, P. Chidambaram, a Harvard-trained economist, recently pointed out the downside of rapid growth. He said the government is seeking to boost investment in infrastructure projects to attract more overseas investment and sustain growth faster than 7% during the next ten years. "Provision of adequate infrastructure is critical for this," Chidambaram said. However, it is evident that Prime Minister Manmohan Singh does not consider it as critical. He has made it known that the country needs $150 billion of investment in roads, ports, and other infrastructure in the next eight years to accelerate economic growth. He expects it to come from abroad.

As an eyewash, the Indian Premier unveiled a plan in 2004 called *Bharat Nirman,* or Building India, and promised to spend 1.76 trillion rupees ($40 billion) by 2009 to fully connect the country's 638,000 villages through roads, electricity, and telecommunications; ensure safe drinking water supply to all; extend irrigation to an additional 10 million hectares; and build 6 million houses. This is not only a pitiful response to the level of poverty that exists today, but it is also not at all certain that even this drop in the bucket will actually be spent, and the objectives achieved.

To remove its poverty, India needs large investments in power generation and distribution, and the development of sources of potable water by building nuclear-powered desalination plants all along the coasts. It needs the development of a large network of telecommunication systems; it needs to build faster railroads, and to open up channels in major rivers so that they can be used for barge traffic; and it needs to build roads to connect the myriad villages. In some of these areas, particularly with the railroads and telecommunication sys-

Information Service of India

The Bhabha Atomic Research Center (BARC) in Trombay is constructing a 300-MW Advanced Heavy Water Reactor prototype, which will use thorium fuel. India has a plentiful supply of thorium, which it views as the "fuel of the future."

tem, this would simply entail broadening the networks and making them operate at a faster speed.

Once the basic infrastructure begins to make a dent in the rural areas, and quality education and health-care facilities are in place, the entrepreneurs will move in to set up large-scale industrial and agro-industrial facilities in these areas. In addition, simultaneous broadening of India's most productive employment base, the small and medium-scale sector, must be rejuvenated through technological upgrades. As demand increases, larger and more capital-intensive industrial facilities, such as steel, cement, petrochemical, engineering, auto, locomotive, and so on, would start attracting investments.

In other words, instead of catering to the consuming demand of the world, by using India's skilled manpower, such a policy would develop India's domestic agro-industrial sectors, while meeting the basic needs of the people and empowering them by creating meaningful employment. This is an altogether different program from the degrading and meaningless National Rural Guarantee Scheme that the United Progressive Alliance government so proudly announced on Feb. 1.

Thorium Fuel-Cycle Reactors

To remove India's poverty, the country needs a large amount of reliable electrical power. Because no other country is ready to pull hundreds of millions of Indians out of their state of sheer despair, India will have to do what visionaries such as Dr. Bhabha had foreseen decades ago. The most important project is India's unique achievement in developing the Thorium Fuel Cycle to generate electrical power in abundance. India's rural, and even urban areas, are crying out for power. Hundreds of thousands of young Indian entrepreneurs have been left on the roadsides, because their ventures went dead as a result of a lack of a reliable power supply.

India has developed natural uranium heavy-water-moderated reactors. But the country is short of uranium. As Dr. Bhabha had foreseen, India would need to switch over from natural uranium-based reactors to thorium-fueled reactors, because India has the second largest world reserve of thorium, in the form of monazite on the beaches of southwestern India. Over the years, India's Department of Atomic Energy has developed the thorium reactor with the sole purpose of becoming energy independent, with an abundant source of electrical power.

In 2004, the construction of the Advanced Heavy Water Reactor (AHWR) began. This is a prototype reactor and is slated to generate 300 megawatts-electric. This will mark the beginning of the third phase of the country's nuclear electricity program in which thorium, the "fuel of the future," will power a string of reactors.

Dr. Anil Kakodkar, chairman of the Department of Atomic Energy, told the Indian news daily *The Hindu,* "We will treat it as a technology demonstrator for thorium utilization which marks the third phase." It would be "an innovative reactor," he said, in its use of thorium fuel and passive safety features. "This is a system which has operator-forgiving characteristics. It will give a grace period of three days for the operator to intervene in any situation. The demands [on the operator] are not likely to be very stringent," he said.

Dr. Kakodkar is spearheading the AHWR project, for which huge engineering development facilities have been set up on the campus of the Bhabha Atomic Research Centre (BARC) at Trombay. The BARC designed the AHWR, and completed a detailed project report in 2002. The safety review is now in progress and techno-economic studies will begin soon.

The fuel for the AHWR will be a hybrid core, partly thorium-uranium 233, and partly thorium-plutonium. In other words, the reactor will convert thorium into uranium-233, which will then undergo fission, using a small amount of plutonium as a driver fuel. Most of the energy will come from thorium-uranium. The reactor coolant is light water, while heavy water acts as the moderator. The reactor initially was to generate 235 megawatts-electric, but its capacity has now been stepped up to 300 megawatts-electric.

The design philosophy of the AHWR is simple but challenging: enhanced safety at less cost, incorporating passive safety features, which do not require human intervention.