

The Limits to China's Growth

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The impressive economic growth of the People's Republic of China over the past quarter-century has led many analysts to predict that China will soon be the world's largest market, have one of the world's largest GDPs, and become the new economic and military hegemon.¹ Encouraged and sometimes even subsidized by their home countries, Western corporations are keen to compete for a share of the China market, some of them so convinced of its future prosperity that they are willing to remain there even while losing money.

These expectations are uncomfortably reminiscent of what was said about Japan until quite recently. American business felt threatened in the 1970s and 1980s by "Japan Incorporated." Management consultants praised the wisdom of what was seen as Japan's Confucian corporate system, where school and family ties created homogeneous decision-making structures that favored the group rather than the individual. Western economists contrasted the U.S. stagflation of the Carter years with the vibrant Japanese economy; their Japanese counterparts were less optimistic, pointing to troubling structural problems in their economy. Even after Japan's economic bubble collapsed around 1990, Westerners predicted a swift recovery. In fact, more than a decade later, the country still has not recovered. While the situations of Japan in the 1980s and China today are quite different, the Japanese experience should point to the dangers of predicting endless economic growth.

But nor is there reason to predict, as some do, China's imminent collapse, either through financial problems engendered by its accession to

¹ See, e.g., Steven W. Mosher, *Hegemon: China's Plan To Dominate Asia and the World* (San Francisco: Encounter Books, 2000); Edward Timperlake and William C. Triplett II, *Red Dragon Rising: Communist China's Military Threat to America* (Washington, D.C.: Regnery Press, 1999); and the enthusiastic predictions of many of the chapters in Pamela C. M. Mar and Frank-Jürgen Richter, eds., *China: Enabling a New Era of Changes* (Singapore: John Wiley and Sons, 2003); the chapters contributed by PRC analysts tend to be more circumspect.

the World Trade Organization² or from an accumulation of problems that will result in a popular uprising.³ There remains considerable inertia in the current system, and its leadership has introduced palliative measures for a number of problems. But these problems, which are outlined below, jeopardize continued economic growth and pose difficult challenges for China's leadership, which lacks the legitimacy of the revolutionary founder generation.

Demographics

By the end of the 1970s, the PRC's population had reached 1 billion. Deng Xiaoping's government instituted a one-child family planning policy, which met widespread resistance. Beijing estimates that the population is growing by less than 1 percent a year and will peak at 1.6 billion in 2030, but Chinese demographers disagree, estimating that 25 to 35 percent of births go unreported and that the true growth rate is more likely between 2 and 2.3 percent a year. The PRC would thus have about 100 million more people than the 1.3 billion its 2000 census indicated. These higher figures are supported by the state family-planning commission's assertion that just one-fifth of the PRC's 320 million families have only one child, and also because vaccination data indicate that far more children are born each year than indicated by census bureau data.⁴ Moreover, notwithstanding the government's announced amnesty on registering unreported children for the 2000 census, many people feared punishment and did not register.

The family-planning laws have, however, resulted in a skewed male-female ratio. Since Confucian culture values men more than women, couples want to ensure that their child is a boy. Female embryos are aborted, and girls abandoned or killed. A male-female ratio estimated at 113–119:100 means that many men will be unable to find wives with whom to have children. This large number of unmarried males also has the potential to endanger social stability.⁵

Party or government birth-control directives have in some cases actually been counterproductive. For example, fines levied on parents for producing too many children soon became an important source of income for local governments, who therefore had no incentive to discourage over-limit

² Gordon G. Chang, *The Coming Collapse of China* (New York: Random House, 2001); Joe Studwell, *The China Dream: the Quest for the Last Great Untapped Market on Earth* (New York: Atlantic Monthly Press).

³ Qinglian He, "A Volcanic Stability," *Journal of Democracy*, Jan. 2003, pp. 66–72.

⁴ See "How Many Chinese Are There?" Dec. 29, 2000, at www.usembassy-china.org.cn.

⁵ The higher figure is from "Three-Year Campaign Launched Against Aborting Girls," *Agence France-Presse* (Beijing), Aug. 16, 2003.

births. In 2002, Beijing announced that it was taking responsibility away from local authorities, but this was not expected to have any appreciable effect.⁶

Energy Sources

China's large coal deposits have until recently been able to meet three-quarters of the country's energy needs, but most of the coal is of poor quality, and burning more of it adds to the already-bad pollution. Worker health and safety standards are inadequate, so miners toil in appalling conditions and the PRC leads the world in mine-related deaths.

As the country's economy grows, so does its need for oil. An oil exporter in 1993, imports were needed to meet one-third of China's domestic needs in 2002. Even with that, by mid-summer 2003, two-thirds of its provinces had announced power restrictions.⁷ Daqing, the country's major oil field, is becoming depleted, and overall domestic production remains flat. *Oil and Gas* journal estimates that by 2015 the PRC will depend on imports for more than half of its energy needs. Since 60 percent of these imports come on tankers from the Middle East and must transit sea lanes that the U.S. navy could easily blockade, China knows it would be vulnerable should the two countries fall out over Taiwan or some other issue. China has therefore actively sought access to oil from Central Asia, but there are difficulties with this: expensive pipelines need to be built, and Chinese oil companies must compete with those of other energy-hungry countries. When several Central Asian states began to cooperate in the U.S.-led war on terror, Beijing worried that the United States might be planning a protracted stay in Central Asia as well. A new energy bureau established under China's State Development and Reform Commission is studying strategies to ameliorate shortages and ensure the security of energy supplies.⁸

Current plans include construction of a 2,260-km pipeline from Angarsk, near Russia's Lake Baikal, to Daqing in northeast China, where oil can be refined and distributed. However, Japan is negotiating with Russia to finance a longer and more expensive pipeline from Angarsk to Nakhodka, on the Sea of Japan. Russia does not have the capacity to supply both, and contingent on finalization of the Angarsk-Daqing pipeline is a 4,000-km gas pipeline that will run parallel to the oil pipeline to Daqing, then turn south to Beijing and Dalian and across the Yellow Sea to South Korea.

⁶Sophia Woodman, "Draft Law Fails To Address Real Population Issues," *South China Morning Post*, July 9, 2001.

⁷Richard McGregor, "Generation Gap Strikes in Shanghai: the City Needs More Power To Meet the Surging Demands of Industry," *Financial Times*, Aug. 19, 2003; "China Mulls Market Strategies for Power Shortages," *Xinhua* (Beijing), Aug. 23, 2003.

⁸David Murphy, "Asia's Pipeline Politics," *Far Eastern Economic Review*, July 24, 2003.

Another plan involves Kazakhstan. In June 2003, Chinese president Hu Jintao signed an agreement to build a 3,100-km oil pipeline from Kazakhstan's Aktyubinsk field to the Xinjiang's Tarim basin in northwest China, where it will join an existing pipeline network. A west-to-east gas pipeline is currently being built from the Tarim basin to Shanghai. Beijing will build the Kazakhstan pipeline only when it has 20 million tons of oil to move through it, and the Chinese company involved has only half that amount. Its bid to acquire more was blocked by a consortium of rival companies based in several other countries.⁹

Hydroelectric projects, which generate cleaner energy and avoid the problem of competition with foreign powers, are also being considered. China's largest river, the Yangtze, has more than half of the country's hydroelectric potential. This would be exploited as part of the Three Gorges dam project, which, should it succeed, will replace a portion of the enormous amount of coal currently being burned in thermal plants, thereby also reducing noxious emissions and wastewater. But the environmental costs are high and the results may disappoint.

In other regions, building the reservoirs required to alleviate water shortages has caused climate changes that erode the surrounding land, and shoddy construction has caused dams to collapse. The area surrounding the large reservoir that is part of the Three Gorges dam complex is characterized by loose-textured soil and frequent floods and rainstorms. As subterranean water levels rise, so do the incidence and size of landslides. Earthquakes also become more likely.¹⁰ Given the enormous scale of the Three Gorges project, the potential for catastrophe cannot be ignored.

Growing Disparities in Income Levels

Under Mao, income was relatively equally distributed and conspicuous consumption was frowned upon. Some high-ranking Party members lived very well, but were careful to conceal it. When Deng Xiaoping pronounced that it was acceptable for some to become rich before others, there was an implicit assumption that all would prosper eventually. At least so far, this is not happening. The reforms have led to numerous income disparities.

The east coast continues to forge ahead, leaving inland and western provinces behind. Average incomes in Shanghai are more than five times those in Gansu province. Rural residents constitute about 70 percent of the PRC's population but possess only 17 percent of the country's savings. A director of the PRC's State Statistics Bureau estimated the gap between urban

⁹ "New Rebuff for China on Kazakh Oil," *New York Times*, May 17, 2003.

¹⁰ Rushu Wang, "Three Gorges: Balancing Environment and Development," in *International Water Power and Dam Construction* (Wilmington, UK), Mar. 31, 2003, p. 34.

and rural incomes as more than five to one, and perhaps even six to one.¹¹ Eighty percent of the money in rural savings accounts belongs to 20 percent of the peasants; 50 percent of peasants have no savings at all. Urban residents in Shanghai and Guangzhou earn far more than residents of rust belt cities such as Liaoning and Heilongjiang. There are also gaps among different industries. Wages have risen fastest in power production and real estate, and only slowly in agriculture, forestry, and fishing. The self-employed and owners of private enterprises receive higher wages than workers in state enterprises.

Differences between the rich and the poor continue to increase. The Gini coefficient, an internationally recognized measure of income disparity in which zero represents perfect equality and one represents perfect inequality, had risen to 0.5 by 2002, up from slightly over 0.3 in the Maoist era. The danger level is considered to be 0.4. Chinese economists are particularly alarmed since the principles on which the PRC was founded included a commitment to the well-being of workers and peasants. The World Bank estimates that more than 100 million Chinese live below the poverty line. Since a disproportionate number of these are peasants, inhabit the western part of the country, and/or are ethnic minorities, the Party and government announced in 2000 a campaign to “invest in the west.” Given investor wariness, however, this has produced few substantive results.

One of the more controversial projects to be announced was the construction of a railway line to Lhasa, the capital of Tibet. Environmentalists were concerned about the damage to the fragile ecostructure through which the route will pass. Many Tibetans viewed the line as another vehicle to facilitate their subjugation to Han Chinese imperialism and destroy their culture.¹² Xinjiang's Muslims and Mongols voiced similar concerns that the invest-in-the-west campaign is a device for ethnic swamping and exploitation of their resources. Thus, paradoxically, an effort to improve living standards in ethnic minority areas has the potential to incite discontent there. Even among Han Chinese, there is a good deal of private skepticism. Members of the Chinese People's Political Consultative Conference worry that corruption would reduce the impact of the money being poured into western development projects.

Inadequate Safety Net

Mao's regime provided cradle-to-grave benefits, albeit at a low level, but failed to provide adequate incentives for hard work. In deciding to “smash the iron rice bowl” of guaranteed employment, Deng Xiaoping simultaneously removed the safety net. This had the desired effect of

¹¹ Qiu Xiaohua, quoted in *Zhongguo Xinwen She* (Beijing), translated in FBIS, Oct. 21, 2002.

¹² See Loten Namling, “Khari Khathug,” *Tibetan Review*, May 2001.

encouraging people to work harder, leading to the outburst of productivity that is the envy of most of the rest of the world. However, the drive for economic competitiveness often led to unfunded pensions and bankrupt health plans.

The crisis in health care is particularly severe in rural areas. When collectives were disbanded in the late 1970s and early 1980s, collective health plans disappeared as well. The number of “barefoot doctors”—paramedics who dispensed medicine and could deal with a variety of common ailments—dropped sharply. Many became private practitioners, charging fees for their services and taking a profit on the medicines they prescribed. Hospitals, ordered to become self-sufficient, began to turn away the poor. Stories of people who died painful deaths because practitioners put profits first became commonplace, and diseases that had been eradicated in the early 1950s, such as cholera and schistosomiasis, began to reappear. Nearly half of the Chinese who live below the poverty line were put there by catastrophic medical expenses.¹³ Since the average age of the population is rising and older people typically have greater health problems, the demands on the system will worsen just as a smaller number of working people are available to pay the costs.¹⁴ According to official figures, there was one retired person per 30.3 employees in 1978, when Deng began his reforms, but the ratio had fallen to 1:3.7 in 1999 and, assuming a continuation of current trends, could reach 1:2.4 in 2030. This is a difficult tradeoff: allowing more births would provide more people to support retirees but also place more demands on an already overstressed environment.

Since the mid-1990s, the government has devised a number of different plans to cope with the health care crisis, tailored for each of urban and rural areas, but so far with little success. For urban areas, the Ministry of Health’s latest plan involves individuals’ paying 2 percent and their employers 6 percent of their salaries for health care. All of a worker’s contribution and 30 percent of the employer’s will go into an individual health account for the worker. This is expected to be devoted primarily to paying for the worker’s outpatient treatment and medications. The remainder of the employer’s contribution will go into a general medical trust fund. Hospitals are to be separated from pharmacies in an effort to curb their practice of prescribing unnecessary or overpriced medications. This plan amounts to cost-shifting rather than cost-containment. Whereas recipients formerly received health care services for free, they are now required to pay a fixed portion of their incomes as insurance. But the benefits covered by the plan are quite limited, meaning that patients will have to pay the remainder

¹³“Chinese Farmers Face Financial Ruin If They Fall Ill,” *Straits Times*, Jan. 2, 2002.

¹⁴This is happening in Japan and several Western European states as well, but since a far larger proportion of the PRC lives at or below the poverty line and because Chinese hospitals regularly turn away even desperately ill people who cannot pay, it is a much more serious problem in the PRC.

themselves. And if hospitals can no longer make up shortfalls on treatment with profits on medications, they are apt to raise the fees they charge to patients.¹⁵

For rural areas, the Ministry of Health's 2003 plan envisions the revival of the health cooperatives of Maoist days. Beijing is to contribute 10 yuan annually for each member of the co-op who lives in a poor hinterland province. Individuals enrolled in the health co-ops and regional governments are to contribute at least as much as the central government. Specific targets include providing 90 percent of children with standard vaccinations, cutting maternal and child mortality rates by 20 percent, and providing 75 percent of the rural population access to basic information on HIV/AIDS. The plan does not discuss how staffs of the co-ops would be paid, nor how the cost of medical care and prescription drugs would be met.¹⁶ The government's initial response to both HIV/AIDS in the 1990s and SARS in 2003—ignoring the epidemics and punishing those who spoke up—is not encouraging.¹⁷ Unhealthy workers are less productive and, particularly if epidemics are not dealt with quickly and effectively, will have adverse effects on future economic growth.

Unemployment

The past five years' efforts to restructure the economy in order to make it more competitive resulted in some 60 million workers losing their jobs. The economy must be drastically further restructured if economic growth is to continue. Beijing knows that restructuring creates high unemployment, thereby reducing product demand in the domestic market and creating the preconditions for social unrest that could result in the overthrow of Party and government. Acutely aware of the potential dangers posed by displaced workers, it instituted various measures to blunt the impact on those affected. Job retraining centers were created. The official media encouraged private entrepreneurship and seeking the jobs that they stated would surely materialize as the restructured economy grew and created new jobs. Some people succeeded at this, starting small businesses that thrived and paid better than the positions they had lost. Unfortunately, this was not the norm. Moreover, the reemployment rate has been falling, from 50 percent in 1998 to 35 percent in 2000, and only 9 percent in 2001.

¹⁵ Baoguang Guo, "Transforming China's Urban Health Care System," *Asian Survey*, Mar.-Apr. 2003, pp. 305-403.

¹⁶ Josephine Ma, "A Rural Medical Scheme Aims to Cover Up to 900 Million By End of Decade," *South China Morning Post*, Jan. 15, 2003; Leigh Jenkins, "Rural Health Plan Finally Unveiled," *ibid.* Oct. 31, 2002.

¹⁷ See, e.g., "AIDS Activist Faces Trial for Alleged Defamation," *Agence France-Presse* (Beijing), Sept. 1, 2003.

In an uncharacteristically frank statement in August 2003, the government admitted that it was making little headway in solving the unemployment problem because the economy is not growing fast enough. The Ministry of Labor and Social Security predicted that by the end of the year, jobseekers would exceed the number of vacancies by 14 million, precisely the figure given for the previous year. It estimated that an annual growth rate of 7 percent would create 10 million jobs—meaning that nearly 30 percent of jobseekers will be disappointed. The 24 million who are on the market include 10 million young people just entering the system, 6 million laid off from state-owned enterprises, and 8 million unemployed who are registered with government labor agencies. Not included are the millions of rural dwellers who are unemployed or underemployed, many of whom flock to cities in search of any job they can find.¹⁸

The government hopes that young people who cannot find a job will continue to live with, and be supported by, their families. As for laid-off workers, they are in theory entitled to compensation, but often find that they cannot collect it. Also in theory, people are guaranteed a minimum living stipend. But cities have the power to determine the minimum level for their jurisdictions, and they tend to set it very low. Moreover, only those people with urban registration are eligible for the payments, so rural migrants who have come to the cities to work are excluded.

Demonstrations have become more frequent, sometimes involving tens of thousands of people. But the protests typically concern a single factory and are suppressed within a few days. The media are forbidden to report on labor unrest, thus limiting the possibilities that the demonstrations will spread to other cities. One technique the government has found successful involves undermining support for protest leaders by making minimal concessions, such as small cash payments to the rank-and-file. At the same time, officials attempt to divide the leaders of the demonstrations by buying some off and arresting others. In May 2003, two of the organizers of peaceful demonstrations in Liaoning were convicted of attempting to subvert the political system and received sentences of four and seven years. Their lawyers were not allowed to attend the sentencing, allegedly because the SARS epidemic might endanger their health. The Liaoning protests did, however, cause the government to remove officials the workers believed were corrupt and force the government to address their grievances.¹⁹ It is unlikely that workers can bring down the system; they are not permitted to organize across factories and cities. But they are increasingly willing to try to do so. As unemployment increases, protests will likely increase as well, with adverse effects on economic growth rates.

¹⁸“Economy Not Working Hard Enough,” *Agence France-Presse* (Beijing), Aug. 16, 2003.

¹⁹“Labor Leaders Found Guilty of Subversion,” *Agence France-Presse* (Beijing), May 9, 2003.

Peasants fared even worse than workers over the past five years.²⁰ In the mid-1990s, farmers' incomes began to drop through the combination of declining prices for grain and rising prices for farm tools and fertilizers. At the same time, the size of local governments, and therefore the costs of running them, increased markedly. Officials exacted a wide range of illegal taxes and fees, resulting in a rise in peasant protests. Beijing has acknowledged that rural discontent is a serious threat to national stability and thus has instituted policies to reduce the peasants' burden. For example, it ordered that fees collected by townships and villages not exceed 5 percent of peasant incomes. The order was widely evaded. A tax-for-fee reform policy abolished all previous fees and taxes, replacing them with a reformulated agricultural tax and a surcharge on the new tax. This reduced peasant burdens but left local areas unable to pay their expenses, even for such basic services as education and infrastructure repair. The local officials will probably find other ways to extract money from the farmers. So far, Beijing has been able to play the role of intermediary between the peasants and their local governments, and peasant protests have been localized. They are not coordinated within rural areas, nor have they established linkages with urban protests. This may not be the case forever.

Unstable Financial System

Much of the PRC's yearly budget deficits reflect losses incurred by state-owned enterprises (SOEs). Zhu Rongji, premier from 1998 to March 2003, introduced a massive fiscal stimulus package, saying that the national economy might collapse without it. In the course of extending credit to keep SOEs afloat and avoid exacerbating the unemployment rate, the PRC's banks amassed large amounts of nonperforming loans. Too often the criteria for loans were personal ties to officials and bribery rather than creditworthiness. The SOEs and other enterprises were frequently unable to repay the loans. Some SOE managers did not comprehend the seriousness of the problem, arguing that, since SOEs are using state funds, no actual losses were involved. The government has admitted having a 27 percent nonperforming loan rate, more than twice the level regarded as safe by the Bank of International Settlements in Basel. Official figures are believed to underestimate the actual number of nonperforming loans, but because China's banking system lacks transparency, it is difficult to be certain by how much. Experts have variously estimated the percentage of nonperforming loans at between 37 and 50 percent. Financial analysts have for several years expressed concern that the banking system might be on the verge of collapse. These fears were

²⁰ Gang Lin, et al., "Crisis in the Hinterland: Rural Discontent in China," Asia Program Special Report no. 108 (Washington, D.C.: Woodrow Wilson International Center for Scholars), Mar. 2003.

heightened when it became known that Chinese banks issued more new loans in the first seven months of 2003 than they had in the entire previous year. With little power to regulate the flow, central bank authorities worried that the loans were fueling capital investment growth on a scale that will allow factories to increase output beyond the market's capacity to absorb their products, guaranteeing a new round of loan defaults.²¹

In 1999, after a series of embarrassing defaults, the government set up four asset management corporations (AMCs) to take over and dispose of the banks' worst loans. The AMCs had difficulty finding buyers for even the least risky of the loans. Hence, many loans, instead of being sold for cash, were converted into stock in the bankrupt companies, allowing even the most inefficient of them to stay in business under government ownership. The AMCs then struggled to raise money for the interest payments on the bonds and were unable to repay China's central bank which had loaned to them an amount that was several times its capital base. More money had to be loaned to the banks, not only adding to the country's budget deficit but calling into question the health of the central bank itself.²²

Corruption

During Mao's era, an austerity code reduced the incentives for corruption. Deng's economic reforms had the opposite effect. There were many gray areas in the transition between a planned economy and a market economy, and some people sought to take advantage of a situation in which the rules were unclear. Speculation, profiteering, and bribery quickly became accepted norms for doing business. Newly built bridges and dams collapsed and just-finished highways developed cracks that rendered them unusable. Fraud has even been discovered in Project Hope, a Chinese charity that pays the school fees of poor children who would otherwise have to drop out. "Chinese mafias" proliferated to the point that they controlled industry sectors and entire villages or neighborhoods of cities. In some areas, people turned to local strongmen to handle their problems, completely circumventing the Party apparatus. In others, Party members were part of these "black gangs," or provided them with protection—for a fee.

Authorities railed out against this "red-black" political-criminal nexus and periodically launched anticorruption campaigns, jailing and occasionally executing a few spectacular miscreants. Those convicted argued, with some plausibility, that their actions had been forced by the system and were the

²¹ Keith Bradsher, "Economic Worries in China As Companies Pile Up Debt," *New York Times*, Sept. 4, 2003.

²² See, e.g., "Mainland Firms Face Probe on Loan Mess," *The Standard* (Hong Kong), July 1, 2003; David Lague, "A Government Move to Clean Up Loans Backfires," *Far Eastern Economic Review*, Nov. 14, 2002.

only way they could get ahead in business. The corruption problem continues to worsen. Paying bribes raises the cost of doing business, and because inspectors are regularly bribed, the quality of the goods sold is adversely affected. Economist Hu Angang concluded that corruption lowers the country's GDP by between 13.2 and 16.8 percent a year. This in turn causes a loss of \$150 billion in tax revenue. Hu estimates that corruption diverts between 15 and 20 percent of the funds for any given project.²³ It also erodes the legitimacy of the Party and government.²⁴

Effects of Globalization

The PRC has been running large trade surpluses with a number of countries over the past decade. The U.S. trade deficit is China's largest, even exceeding that with Japan. The U.S. Congress has called for protectionist measures and established at least two commissions to look into causes and remedies for this deficit.²⁵ In summer 2003 it began to pressure China to revalue its currency. Members of Congress have taken note of U.S. factories that close because they lose market share to firms in China and of U.S. companies that relocate to the PRC to take advantage of the lower wages and more lax environmental standards there. Many other countries, including Brazil and Mexico, have lost jobs to the PRC, and growing resentments may lead to an anti-China backlash that would reduce demand for the PRC's products.

If globalization is helping Chinese workers, it is hurting Chinese farmers, whose tiny plots cannot produce enough to compete with agribusinesses in more developed countries. The already-existing problems of the countryside described above will be exacerbated as WTO-mandated removal of agricultural subsidies take effect. Beijing is plainly worried.

The Environment

China's long-term environmental degradation has been accelerated by recent rapid economic growth, exacerbating the destruction of forests, the use of marginal land for farming, intensive exploitation of agricultural land, and overgrazing of grasslands. Twenty-eight percent of the PRC's land mass has been desertified, and an additional 18 percent of the country is at risk. More factories and more people produce more waste matter. According to a World Health Organization report released in 1999, nine of the ten cities in

²³ Sun Zhifa, "Hu Angang Speaks Freely About Four Categories of Corruption," *Zhongguo Xinwen She* (Beijing), Feb. 23, 2001.

²⁴ David Hsieh, "Lawmakers Give Lower Rating to Graft Report," *Straits Times*, Mar. 19, 2003.

²⁵ The Deficit Review Commission and its successor, the U.S.-China Economic and Security Review Commission, www.uscc.gov.

the world suffering from the worst air pollution are in China. The huge increase in population in coastal China has resulted in shortages of surface water. Groundwater has been used to make up the difference, causing problems of sinking in some areas. The Chinese Academy of Sciences has warned cities to take this into account when drawing up their development plans. The Yellow River, the siltation of which has led to disastrous floods in the past, now runs dry for long stretches each year. Water shortages are common in many cities and are predicted to get worse. It is estimated that water scarcity in cities costs about \$14 billion a year in lost industrial output, and that, together with pollution, it contributes to crop losses of about \$24 billion annually.²⁶

Government efforts to solve one environmental problem often result in causing another. For example, an electricity shortage in Qinghai province was relieved when Beijing built a hydropower station, but the huge reservoir that had to be created as part of this project lowered surrounding temperatures, creating winds that eroded the nearby grasslands and consumed the prairies on which local herders relied. In some cases, the results were exactly opposite of what was intended. Reforestation plans that involved planting trees at the edge of deserts could not be sustained by natural rainfall; the trees therefore overdrew from scarce groundwater, which only worsened the desertification.

A massive South-North water diversion project aims at bringing water to the parched cities of north China, but it is very expensive and highly controversial. Begun in 2003, it is expected to take 50 years to complete and to cost nearly \$60 billion. Experts have warned that unless the water can be cleaned beforehand, the huge endeavor will simply have diverted sewage from one part of the country to another. Officials in the cities scheduled to receive water have privately expressed concerns that it may cost them more to treat the water than is economically feasible.²⁷ China's environmental scientists have warned that their country's ecological underpinnings are weakening.

International Issues

Large yearly increases in defense budgets since 1989—while other countries were downsizing their militaries and reducing weapons inventories, and with the PRC itself confronting no external threat—have caused considerable anxiety among China's neighbors. The status of Taiwan and the Spratly, Paracel, and Senkaku islands is contested, and there are disputed land borders as well. Anxious as they are to avoid offending the more powerful PRC, China's neighbors have nonetheless been taking steps to protect themselves.

²⁶ Elizabeth Economy, "Heading Off An Environmental Catastrophe," *South China Morning Post*, Jan. 29, 2003.

²⁷ Ray Cheung, "\$472 Billion Water Plan Carries Hopes of Arid North," *South China Morning Post*, Dec. 27, 2002.

Japan, for example, has moved to enhance its military effectiveness and revise its constitution to permit self-defense. Although publicly explaining that this is a precaution against possible aggression from North Korea, both Beijing and Tokyo know that Japan's major concern is the PRC. When India conducted nuclear weapons tests in 1998, its defense minister declared that the bomb was necessary as a deterrent against China, India's main enemy.²⁸

A number of countervailing coalitions exist, albeit in low-key and nascent form. Anti-piracy and antiterrorist activities justify joint maneuvers. The ill-will that existed between India and the United States as a result of India's nuclear tests has been transformed into a regular pattern of military exchanges and joint training. There have been quiet contacts among India, Japan, and Taiwan as well. A PRC that appears to be growing steadily both economically and militarily may be able to induce its neighbors to accommodate to its wishes, but it could equally lead to stronger counterpressures from other states.

Conclusions

The factors discussed above interact in subtle ways with unpredictable effects. Environmental deterioration reduces agricultural productivity and causes health problems; it may also cause blackouts and water shortages that reduce urban productivity. A fragile banking system can lead to financial collapse and social chaos. Although the outside world pays more attention to financial crises and social issues, a larger share of social unrest and dynastic change in Chinese history actually stemmed from grave natural disasters.²⁹ With the potential for natural disasters increased by manmade environmental problems, the potential for social unrest also becomes greater.

China may also have difficulty moving beyond its unquestioned successes in manufacturing goods for overseas companies and into developing its own product lines. China's advantage in low manufacturing costs is so overwhelming as to disincentivize investment in innovation. The PRC's companies devote few resources to research and development. Selling well in China depends on one's knowledge of the country's arcane distribution networks, exploiting relationships with local government officials, and pricing strategies. These skills have little relevance to evolving a brand, producing creative industrial design, or even employing generally accepted supply-chain management methods. Hence they do not equip Chinese companies to sell anywhere else in the world.³⁰

²⁸ "India Sees China As Its Biggest Threat," *Agence France-Presse*, May 5, 1998.

²⁹ Wang Dan, "Keep An Eye on China's Natural Disasters," *Taipei Times* (Taipei), Aug. 30, 2003.

³⁰ China Economic Quarterly, "Waiting for the Sons of China? Keep Waiting," *South China Morning Post*, Sept. 1, 2003.

Certainly Beijing is aware of the challenges that have to be overcome if economic growth is to continue even on a scale so modest as to absorb new entrants to the job market. It has introduced corrective measures, some well-conceived and some not, to address many of these problems. But efforts to solve one problem seem to cause others. These palliative measures are likely to prevent system collapse, but will take their toll on future economic growth. The resource constraints, countervailing pressures, and irreconcilable trade-offs discussed above will prevent the PRC from becoming the new hegemon, or even a superpower, any time soon.

