

Built in stages and connected around 200 BC, the Great Wall was 2,400 km (1,500 mi.) long. It was surprisingly effective in keeping out aggressors for many centuries. Today it is a major tourist attraction. Badaling is the most popular center for visitors, having a new fast highway link to Beijing that makes a half-day visit possible.

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chapter 5

East Asia

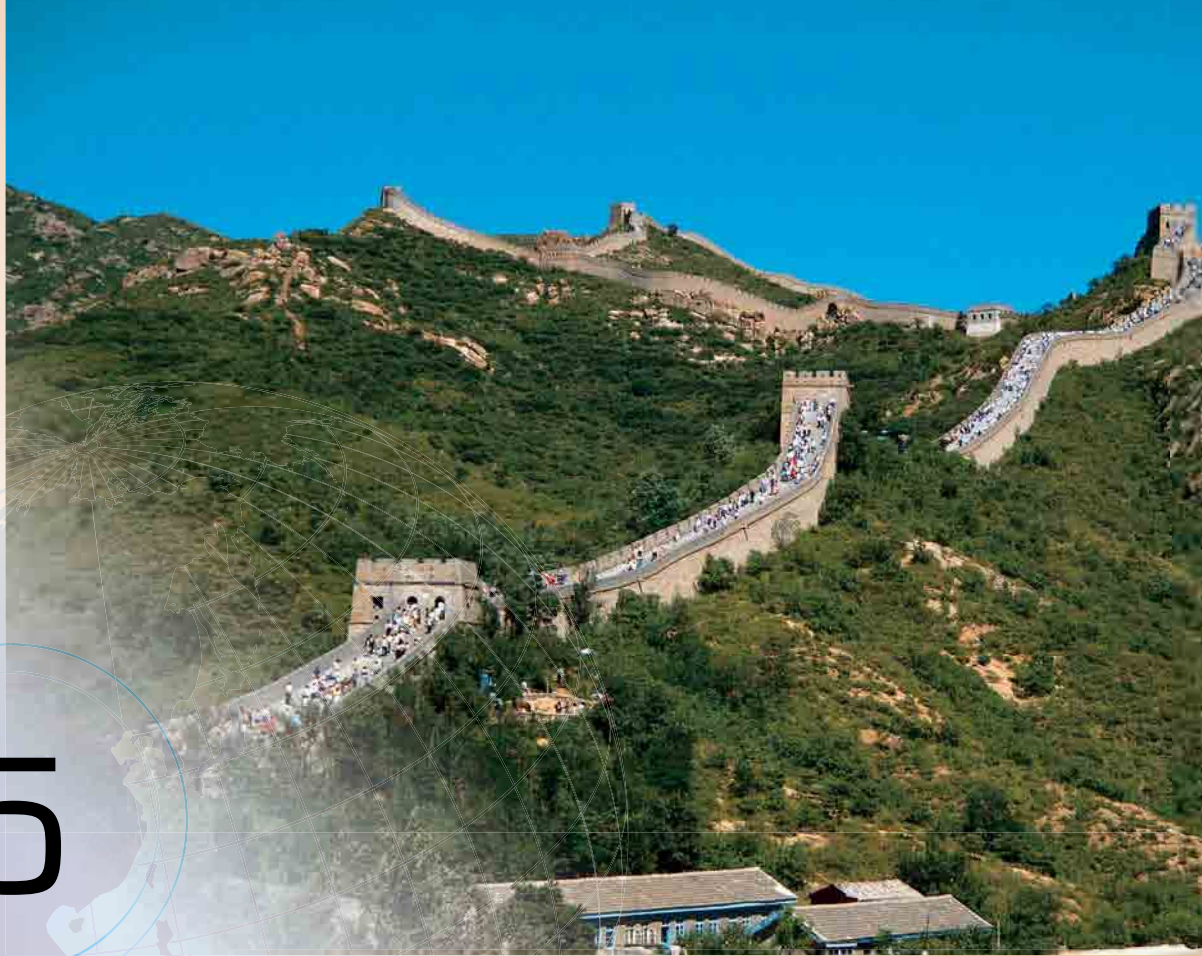




FIGURE 5.23 Japan: Islands, Major Districts, and Cities. (a) Assess from the map the significance of the mountainous interior and the long coast for Japanese geography. (b) Many islands are linked by bridges and tunnels. The Seto Great Bridge links the islands of Shikoku and Honshu ('X' on map). Photo: By permission of Japan's Ministry of Foreign Affairs.

businesses, including much of Hollywood, and in seeing their production methods adopted widely. However, the 1990 stock market and 1993 land and property crashes renewed the tensions between internal and external forces. Major Japanese companies faced bankruptcy and downsized their management capability. They laid off staff, who had expected a lifetime job and for whom this brought a major loss of face. They adopted U.S. attitudes to employment and the running of corporations. This crisis of identity came at a time when the traditional authority of family and school was also challenged.

Through the 1990s and into the early 2000s, public figures such as authors, popular comic-strip writers, and the mayors of some major cities raised nationalistic issues. These included the use of the rising sun flag, the role of the Self Defense Forces (and forbidden wider military development), and the U.S.-mandated postwar constitution. The shift to Western production and staffing policies by major corporations included the takeover of Nissan by the French company Renault. Events such as the Gulf War became significant to the sensitivities of Japanese national pride. In 1991, forbidden by its constitution from providing military resources to the international consortium freeing Kuwait after the Iraqi invasion, the Japanese government offered a huge sum to

help pay other countries. Many Japanese were upset when their country was unfairly, but widely, derided for taking the soft option of paying instead of sending soldiers.

Economic Development

The Japanese economy changed massively after World War II. From 1960 to 2002, farming, fishing, and mining—together forming the primary sector of the economy—declined from 33 to 1 percent of output; manufacturing rose to 30 percent before falling to 21 percent; and the service sector rose from 38 to 68 percent.

Agriculture

Japanese farms occupy small areas of arable land within the hilly and mountainous country, often intermingled with housing and industry that can pay higher prices than farmers could afford without subsidies, by which the government maintains agriculture as a significant sector of the economy. After 1945 the Japanese government bought rice at a price that enabled the farmers to mechanize, and tariffs protected them from world market competition. New tastes for Western foods, however, halved rice demand after 1960. The rice that could not be sold

formed a stored “mountain” that was too expensive to export. Rice acreage fell as farmers converted land to cultivate vegetables and fruit, reducing the rice store. Rice still costs Japanese consumers six times what Americans pay and thirteen times what Thais pay.

Although subsidies made farm incomes secure, migration from rural to urban locations for the better-paying jobs, better education opportunities for children, and social life halved the rural population from 1960. After 1970, only 12 percent of farmers worked full-time without off-farm jobs. The remaining farmers were often aging and found it difficult to compete in a world of declining subsidies and rising foreign competition. The size of most farms remained stable, however, because land increased in value and many owners held on to their property as a family investment.

In the early 2000s Japanese farmers faced new shocks. Improved transportation links and refrigeration brought large quantities of Chinese tomatoes, eggplants, onions, and garlic bulbs to Japanese supermarkets. For example, on Tokyo’s wholesale markets Chinese shiitake mushrooms sold for less than one-third the price of the Japanese varieties and quickly took a 40 percent share from Japan’s 30,000 shiitake growers. Forest products and the bulrushes used for making tatami mats are also under pressure from cheaper Chinese sources.

Manufactures: Reconstruction

After dismantling Japan’s World War II industrial base, the United States poured money into the country to rebuild its industries and infrastructure. The Cold War that began in the late 1940s, the Communist takeover in China, and the Korean War of the early 1950s resulted in American markets opening to Japanese products. Cheap raw materials on world markets and its own low-cost, young labor force enabled Japanese manufacturers to undercut their rivals in the world’s wealthier countries and gain overseas markets. The Japanese government assisted and advised industry, with the **Ministry of International Trade and Industry (MITI; now the Ministry of Economy, Trade and Industry)** encouraging export sales through a worldwide network of market intelligence gathering offices. Following the rebuilding of heavy industries such as steelmaking and chemicals in the 1950s, Japan diversified into shipbuilding, automaking, and light manufactures that were demanded by consumers at home and abroad. In the mid-1950s, when the Suez Canal was closed and Western companies sought cheaper ways of transporting oil, Japan made timely transportation innovations such as building very large oil tankers and bulk carriers for other commodities. These bulk tankers and carriers brought home oil from southwestern Asia and coal and iron ore from Australia.

During the 1960s, total output from the Japanese economy increased by 10 percent per year. At this stage, Japanese workers waited for the gains in prosperity as their firms plowed profits back into new developments. It was not until the 1970s that Japan established a favorable trade

balance and paid better wages so that its own consumers could buy a range of Japanese-made products. Import restrictions discouraged foreign-made products.

Manufactures: Increasing Costs and “Just in Time”

In the 1970s labor shortages, increased oil prices, a world shipping slump, and reduced demand for some products caused Japanese corporations and their supportive government to rethink policies. For example, as Japan depended on (now more expensive) imported oil for 70 percent of its energy needs, the Japanese government reduced the costs of internal hydroelectricity and nuclear power and subsidized unprofitable coal mines.

By the 1980s the older industries such as steelmaking, shipbuilding, petrochemicals, and cement making suffered from overcapacity on world markets and competition from newly industrializing countries such as South Korea. Factory closures led to social problems caused by unemployment, particularly around Osaka.

However, responses to the changes took Japanese industries into a new era. Greater investment raised the output of light industries such as those producing cameras and household appliances. After copying others’ technologies and designs, Japanese firms became initiators. The increased application of technology brought productivity and international competitiveness gains in industries including electronics, robotics, and new materials. By 2000 Japan had half of the world’s industrial robots, four times the number installed in the United States. Careful control of inventories by “just-in-time” deliveries cut warehousing costs in assembly industries and freed more factory space for production. Toyota—a company that led the way in technologies of production—found that the indiscriminate use of robotics and automation was too expensive. The company moved to a system that involved robotics where appropriate but also employed more human skills in making cars.

Japan’s successful exports became known for their quality, reliability, and market-leading technology. In the 1980s other countries built huge deficits of payments to Japan, causing the Japanese currency, the yen, to double in value compared to other international currencies. This made Japanese exports more costly for other countries to buy. Imports became cheaper, however, so that the Japanese spent more on products made abroad as well as those made in Japan. The major boom in retailing was joined by another in the construction of new houses and apartment blocks. Japan turned from a country of producers into one of consumers. As demand for more luxury and prestige goods rose, Japanese manufacturers moved into these fields, competing with imported goods.

Manufactures: Global Investments

From the 1980s, the Japanese corporations with large yen trading surpluses invested more overseas. They first



PERSONAL VIEW

The Japanese Tsunami of 2011

Perched on top of one of the most active seismic areas in the world, Japan was hit by a 9.0 magnitude earthquake, followed by a killer tsunami on March 11, 2011. Many coastal communities, particularly in northern Japan, were obliterated. Although Japan's sophisticated earthquake warning system and tsunami alert scheme are believed to have saved countless lives, the disaster caused some 14,000 deaths. More than 14,000 people became homeless and more than 136,000 were displaced. The tremor and wave damaged Fukushima Daiichi nuclear power plant, compounding problems as overheated fuel rods caused explosions, fires, and radiation leaks. This disaster appeared likely to be the costliest one in Japan's history. Fear and uncertainty caused the Tokyo Stock Exchange to lose \$700 billion in just three days, although injections of money by Japan's central bank quelled most of the financial panic. Disruption of electricity, loss or damage of infrastructure, and the breakdown of supply chains resulted in suspended or slowed production in the semiconductor, auto, and other key industries, slowing down the world's

third-largest economy. But the Japanese people have shown remarkable *gaman*, a mix of fortitude and selflessness, uniting to work hard to recover from the disaster.

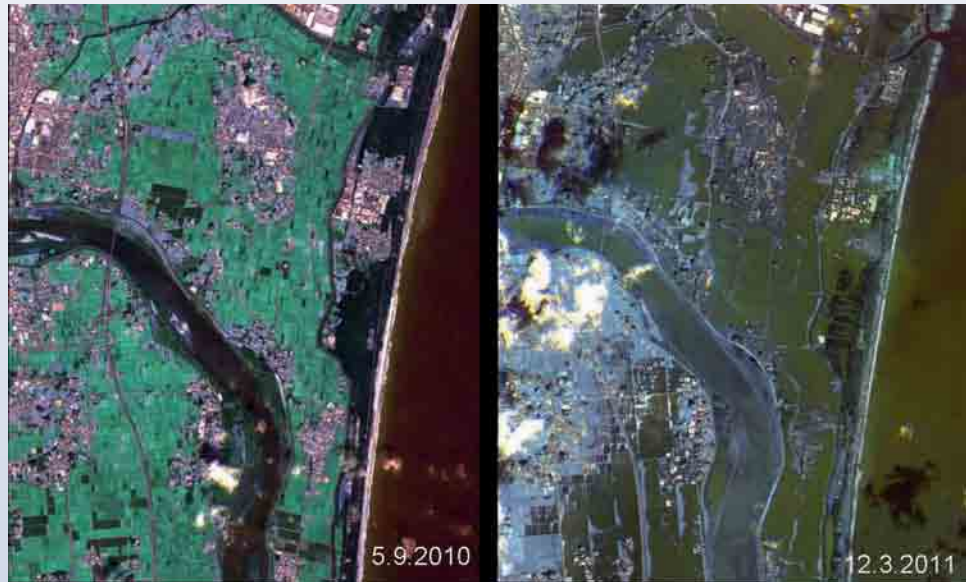


Photo: German Aerospace Center (DLR)/Rapid Eye/NASA.

bought out their foreign mineral suppliers and later established Japanese factories overseas. Building large productive units in other countries during the 1980s and 1990s also helped them penetrate markets that had previously placed quotas on the import of, for example, Japanese-made cars. In the late 1980s, after major investments in the United States and Britain to establish 14 Japanese auto plants, Japan switched investment to Southeast Asia. The economic growth of Thailand, Malaysia, and other countries in Southeast Asia received a major stimulus as Japanese investments poured in.

From the mid-1990s, a further phase of Japanese investment abroad expanded previous investments in cheap-labor, assembly-line factories by moving design and research facilities to Southeast Asian countries. Japan also made increasing investments in China, particularly in the northeastern port of Dalian and other areas close to Japan. By the early 2000s most Japanese multinational corporations such as Sony, Hitachi, Toshiba, NEC, and the automakers Toyota, Honda, Mazda, and Nissan used parts and whole products manufactured and assembled in

China. Chinese manufactures, often with Japanese corporate badges, began to flood the Japanese markets at home and overseas. Japan's fragile financial system had another economic factor to cope with. Japan now has a huge trade deficit with China.

Renewed Economic Challenges and Services Growth

By the early 2000s Japan again faced a need to change. It suffered from falling prices and business collapses, its established systems of government-business linkages were undemocratic and increasingly inefficient, and its banking systems came under pressure because of huge debts, particularly those resulting from investments in Southeast Asia. While Western nations imitated Japanese production processes and competed against Japanese goods in world markets, the Japanese looked more closely again at Western ways, particularly in relation to financial control.

The huge trade surplus from exports of manufactures resulted in the rapid growth of Japan's financial and business services. In 1986, as well as being the center of govern-

ment administration, Tokyo became the world's second financial center after New York and ahead of London. The additional functions led to further population increases in the Tokyo region.

Throughout Japan, the increase in service occupations, from education and health care to retailing and tourism, widened the range of employment and contributed to a diversified economy that is not so dependent on the fluctuations of world markets as when manufacturing dominated it. Japan's popular culture ranks high among the country's latest exports. Revenue from royalties and sales of Japanese music, video games, anime, comics (*manga*), films, and fashion rose 300 percent during the 1990s. In 2010 Japan's Ministry of Economics, Trade, and Industry made the export of such popular culture items a priority, because greater global use of the items would add to Japan's "soft power," which rests on making Japanese cultures attractive to diverse groups of people.

Japan's Regions and Cities

Not all of Japan is equally prosperous. Japanese physical environments—from snowy Hokkaido in the north to subtropical Okinawa in the south and from the volcanic mountain spine to the coastal lowlands—combine with distinctive contrasts in urbanization, manufacturing emphases, and rural ways of life. Japan consists of four main islands: Hokkaido, Honshu, Shikoku, and Kyushu (see Figure 5.23).

Hokkaido

The northernmost island of Hokkaido has over 20 percent of the land but only 5 percent of the Japanese population and produces just 3.8 percent of the total GDP. The island's previous inaccessibility from the rest of Japan was reduced by better air services and a direct rail link through the Seikan tunnel under the Tsugaru Strait. The improved access encourages farmers to grow new breeds of rice and produce dairy products and crops linked to the increasing Japanese demand for Western-style foods. Farm products now exceed the value of Hokkaido's traditional natural resource-based industries (fishing, coal mining, and forestry). The 1972 Winter Olympics at Sapporo—now Japan's fifth-largest city—gave a boost to tourism on the island. The recession of the late 1990s, however, affected this region badly, with many bankruptcies and increasing unemployment.

Honshu

The main island of Honshu has three parts. Northern Honshu (Tohoku) has a relatively sparse population for Japan, but its density is twice that of Hokkaido. There is better transportation infrastructure, although the central mountains make crossings between the two coasts difficult.

This region is Japan's leading rice producer, with 25 percent of the total, much on reclaimed coastal lands.

In the early 2000s, the economic problems facing Japan brought particular hardships to northern Honshu. Always a vulnerable area with little manufacturing employment, its main sources of income and jobs in fishing and farming suffered from declining stocks of fish and price competition from overseas suppliers. The main fishing port of Hachinohe had newly opened pinball stores that were full of unemployed fishermen and workers from idle fish-processing plants. The apple orchard owners had to diversify because the price of apples was so low, while Chinese produce undercut the local garlic growers. Public money financed infrastructure projects rather than local industries. Workers in short-term construction jobs had to move elsewhere to continue employment.

Central Honshu includes the Tokyo region (Kanto). It is the heart of Japan in terms of population concentration and economic activity: 31 percent of the population produces 37 percent of Japanese GDP on less than 10 percent of the land. Tokyo, Kawasaki, and Yokohama fuse into a huge urban complex around Tokyo Bay (Figure 5.24). Tokyo itself, having 35.5 million people in 2009, is the world's most populous metropolitan area. Tokyo is Japan's center of government, finance, and internal and international service industries; Yokohama is Japan's busiest port; and Kawasaki has heavy industries. Oil refineries, steel mills, chemical plants, and power stations line the waterfront and cover large sectors of reclaimed land. The rest of the plain around this megacity still produces much rice, together with fruit, vegetables, poultry, and pigs for the nearby markets. Volcanic mountains around



FIGURE 5.24 Japan: Tokyo–Yokohama–Kawasaki Urban Area. Sukibayashi pedestrian crossing, Ginza. Photo: © Vol. III/Corbis RF.

the northern and western margins of the bay area have winter sports facilities, and their hot springs attract other tourists.

The Pacific coastal area south of Tokyo is an industrial corridor of connected lowlands where a line of cities along the “bullet train” (*shinkansen*) and major highway routes have urbanized former agricultural land. Nagoya is Japan’s third-largest city and the center of a textile region that now has automaking (Toyota City), oil refining, petrochemicals, and engineering industries. This region’s diversified and growing industries suffered least in the late 1990s recession.

West and north of the Tokyo complex, the land in Chubu is more mountainous. The northern coastlands facing the Japan Sea form another rice-growing district. Mountains separate it from the main economic areas of the country, although highway and rail links penetrate these Japanese “Alps.” The 1998 Winter Olympic Games were held at Nagano in this area, which receives winter snow from winds crossing the Sea of Japan. The mountains include national parks, such as that around Mount Fuji, Japan’s highest peak (3,776 m, 12,388 ft.), and have hot springs. Chubu leads the country in generating hydroelectricity.

Southern Honshu contains Japan’s second most prosperous region, Kinki, which includes Osaka and its immediate hinterland. Three cities dominate the eastern part of this region. Kyoto is Japan’s sixth-largest city and was the country’s capital from AD 794 to 1868; it remains a cultural and tourist center and has craft industries such as silk, pottery, and traditional furniture. Osaka, Japan’s second-largest city, and Kobe are industrial ports on Osaka Bay. Following an early specialization in textile manufacturing, the area shifted into iron and steel, chemicals, and shipbuilding in the 1920s, adding oil refining, petrochemicals, automaking, and domestic appliances after 1945. Reclaimed land from the Inland Sea became the site of port facilities and heavy industry using imported raw materials. In 1995 the new Kansai airport was opened, built on reclaimed land south of Osaka, but there are concerns about subsidence of the fill materials and the threat of rising sea levels as a result of global warming. This part of southern Honshu became Japan’s “rust belt” of declining industries in the 1980s, and it was hit hard in the late-1990s recession. In 2001 the area around Osaka and Kyoto had Japan’s second-highest unemployment rates of 6 to 7 percent (compared to a national average of 5 percent).

The western peninsula of southern Honshu (Chugoku) has coastal lowlands on either side of a mountainous spine. While a harsh winter climate and poor links with the rest of Japan mark northwest-facing coasts, the southern coast looking to the Inland Sea has a better climate. The latter area responded economically to improved accessibility by train and road after 1945.

Shikoku

Shikoku is a mountainous, small island with only 5 percent of Japan’s land. The Pacific side of the island has a warm, moist climate, but mountains isolate it from the northern coasts facing the Inland Sea that are industrialized and irrigated for crops. Major bridges now connect the island with the rest of Japan.

Kyushu

Kyushu, the westernmost island, is connected by tunnel to Honshu. It was the historic point of entry to Japan for Buddhism and early Christianity, new writing script, and trade. Two-thirds of the island’s population live in the northern region around Fukuoka and Kitakyushu, both having long-established metal, chemical, and shipbuilding industries. These began to decline, but in the 1980s, Kyushu attracted automaking and high-tech industries with expanding research and development facilities.

Farming and fishing remain important in the economy. Much of Kyushu is a rice-growing area. It is warm enough for a second crop of vegetables or rushes, while early crops are grown for the large cities farther north. Mandarin oranges, tobacco, and livestock are produced on the hills. There is a growing tourist industry.

Ryukyu Islands

Offshore, the Ryukyu Islands, including Okinawa, stretch for 1,000 km (650 mi.) southward toward Taiwan (see Figure 5.1). Their economy has not developed with the rest of Japan, and they have high unemployment. Many still have American military bases alongside the traditional fishing and agriculture, and a tourist industry is developing. There are pressures for the removal of the U.S. military personnel, although most of the remaining U.S. troops are based on Honshu.

5.7 THE KOREAS

North Korea and South Korea (Figure 5.25a)—officially the People’s Democratic Republic of Korea and the Republic of Korea, respectively—occupy the hilly Korean peninsula that extends southward from the Chinese border along the Yalu River. The peninsula almost touches Japan at its southern end. The two Koreas shared a common ethnicity and history to the mid-1900s but after that moved in different directions.

At the end of World War II, the United States and Soviet armies defeated Japan and divided the “freed” North and South Korea at the 38th parallel. The Soviet Union administered North Korea, and the United States administered South Korea. Independent republics were created in 1948. North Korean forces invaded South Korea in 1950.



(a)



(b)

FIGURE 5.25 The Koreas, North and South. (a) After the history of Japanese occupation in the early 1900s, the Koreans prefer the term “East Sea” to “Sea of Japan” but have not convinced others to change the name. (b) The Demilitarized Zone. A bridge crossing the frontier river has been destroyed and trees cut to maintain an open-vision area. Photo: © Alasdair Drysdale.

The United Nations sent military under U.S. commanders to support South Korea, and, following destruction over much of the territory as warfare moved back and forth, the two sides agreed on an armistice in 1953. The agreement resulted in the formation of a Demilitarized Zone between the two countries (Figure 5.25b). This strip of “no man’s land” is flanked on both sides by heavily militarized areas. Tensions between the countries remain, causing them to maintain powerful defensive capabilities. North Korea possesses the ability to make nuclear and biochemical warheads.

By the late 1990s there were signs of closer ties developing between the two countries. Presidential visits led to reunions of Korean families separated for 50 years. Talk of reunification of the two countries gathered some momentum, but both countries had reservations about such a move. More recently, there have been heightened tensions between the two countries. North Korea was held responsible for the 2010 sinking of a South Korean warship and for the death of 48 sailors on board, as well as the shelling of Yeonpyeong island, allegedly in retaliation for artillery fired toward it by South Korea.

Countries

With huge support from the United States after the Korean War, South Korea became one of the newly emergent

urban-industrial countries linked to the West and the global economic system. South Korea’s governments ranged from paternalistic democracies to dictatorships, using absolute power to promote personal savings and encourage export industries. By the 1980s and 1990s, such policies led to rising prosperity for many and large trade balances for the country. Freer elections introduced from the mid-1980s led to increases in democratic processes during the 1990s. South Korea’s financial sector, together with its mode of industrial organization in large conglomerate firms, or *chaebol*, threatened to weaken much of the country’s economy and political stability in the late 1990s, but attracted successful rescue measures.

North Korea maintained a Communist regime under the personal dictatorship of Kim Il Sung and his son Kim Jong-il, who succeeded him in 1994. Supported by the Soviet Union and China during the Cold War period, North Korea’s isolation from the rest of the world and suspicions of South Korea and the West caused it to invest heavily in military capabilities instead of economic development. After the loss of Soviet Union subsidies in 1991, North Korea depended increasingly on international aid to make up for internal economic collapse and famine. Its main bargaining point is its possession of nuclear and biochemical weapons and ballistic missiles to deliver them. North Korean brinkmanship policies attract international

aid to prevent military action. South Korea contributes almost half of all aid to North Korea.

South Korean Economic Development

Reconstruction and Economic Growth

After World War II and the Korean War (1950–1953), South Korea established **import-substitution industries** that developed manufacturing skills and reduced the need to pay hard currency for foreign goods. The transportation infrastructure built by the Japanese when they ruled Korea in the early 1900s and rebuilt with external funds after the 1950s war helped develop the Korean economy. South Korea built a new series of major highways, and its public transport system is one of the world’s best.

The devastating Korean War in the early 1950s took place when three-fourths of the South Korean people still gained a living from farming. In postwar land reforms, the government took over large, inefficiently run estates and encouraged a new group of small landowners to apply imported fertilizers. Farm productivity rose, and South Korea became largely self-sufficient in food. The farming and rural emphasis gave way to manufacturing, services, and urban living. A country of subsistence farmers under largely feudal control was transformed in a generation to the world’s main maker of large ships and memory chips, the fifth-largest automaker, and the eleventh-largest world economy—with greater output than the whole of Africa South of the Sahara. From the early 1960s to the early 1990s, few other countries’ economies grew so fast. Exports rose from \$33 million in 1960 to \$162 billion in 2002. South Korea’s total economy (GDP PPP) was 17 percent of China’s and 30 percent of Japan’s in 2009.

Manufacturing and the *Chaebol*

The iron and steel, shipbuilding (Figure 5.26), chemicals, automaking, and textiles industries established from the 1950s continue to be important, although in the 1990s there was a swing toward high-tech industry. In this development, the South Korean government supported the family-owned companies that developed into huge conglomerates—the *chaebol*, such as Hyundai, Daewoo, LG (Lucky Goldstar), and Samsung. The *chaebol* became diverse in their products, starting up subsidiaries that often had little chance of success, taking on massive debts, and providing major problems for the country. However, when Halla, the twelfth-largest *chaebol*, went bankrupt in 1997 with debts of 20 times the company’s assets, Hyundai, the largest, was found to have guaranteed around 15 percent of the debts. This highlighted the fact that the founders of the two *chaebol* were brothers and had strong cross-company links. Family loyalty—part of Korean (and Confucian) culture—was exposed as making problems for running

large corporate businesses in a free market that demands increasing transparency. The *chaebol* also controlled large parts of the South Korean financial markets, providing an environment for building up debts that were shared through many links.

As an example of *chaebol* history, South Korea was once called the “Republic of Hyundai” after one of its most powerful *chaebol*. After the 1997 crisis exposed its huge debts and damaging grip on the economy, Hyundai was restructured around several independent companies. Hyundai Motor, however, is the only one that makes profits, driven by its U.S. sales. Roh Moo-Hyun, who became president of South Korea in 2003, pledged to make the *chaebol* more accountable. In this he has the support of young reformists, who wish to change the country’s conservative, business-driven political system to one that is more liberal.



FIGURE 5.26 South Korea: Ulsan City Shipyard. The Hyundai *chaebol* is a major builder of large ships. Note the space required for assembling the materials and the range of equipment used in construction. Photo: © Vander Zwalm Dan/Corbis.

South Korea was a major investor in modern China in the early 1990s, taking advantage of cheap labor costs in the nearby Chinese province of Shandong. The initial rush of small companies to invest in Chinese locations prepared the way for major South Korean corporations such as Daewoo, Samsung, and Hyundai, which link to hundreds of smaller companies producing their components and products.

In late 1997 indebtedness reached the point where the South Korean currency unit, the won, and its stock exchange collapsed. Devaluation of its currency increased South Korea's indebtedness to other countries. Bank closures, bankruptcies, and unemployment stirred militant trade unions into political action against the stringent conditions proposed by external loan providers. By the early 2000s the South Korean economy had largely recovered, helped by the breakup of some family-owned *chaebol*, and several of the new firms merged with U.S. and European corporations.

Developing Broader Interests

In 2002 the South Korean government signaled its intention to develop the island of Cheju-do (Jeju) off its southern coast. The island's natural environmental potential includes its pleasant climate and attractive scenery, from an extinct volcano to many waterfalls and beaches. It is a traditional honeymoon destination, center of tangerine plantations, and home of professional women divers who pluck seafood from the ocean floor. The project symbolizes South Koreans' sense of vision, their appreciation of the country's geographic position, and probably their overly optimistic hopes. South Korean officials managing the project make much of their country's central position between Japan and China and the government's intentions to make business friendlier. Cheju is two hours' flying time from Beijing, Tokyo, and Hong Kong. South Korea has proposed to turn the island into an international business and tourism hub akin to Hong Kong and Singapore, with a free-trade area in which English will be a second language. Overseas universities could set up campuses alongside a science and technology park, duty-free shopping malls, and 20 golf courses. The South Korean government is committed to paying half the projected costs of the project, which will require a new airport, better roads, and more hotels. This will depend, however, on large investments from the private sector. Moreover, the local population of half a million complains about the lack of consultation and worries about the environmental impacts.

Although mostly noted for its economic growth, South Korea also has an increasing regional contribution in popular music that is both cultural and economic. Young pop stars such as Boa develop alongside other youth culture inputs in movies, TV shows, computer games, and fashion. This trend relates partly to South Korean consumers preferring local products to Western music and movies. It is also

part of South Korea's development of knowledge-based service industries. South Korean "K-pop" bands top charts in Taiwan and Cambodia, while Korean TV dramas are highly rated in Vietnam. China, with its huge and growing market for music, is a prime target for record companies, which envisage setting up an academy for discovering young Chinese pop stars. The main problems for a South Korean venture in China are the rogue bands that copy songs and the rampant piracy and copying of CDs. The 2002 World Cup soccer finals, co-hosted in South Korea and Japan, provided a further platform for wider penetration of both Western and South Korean products.

Economic Stagnation in North Korea

When the Japanese ruled the whole of Korea in the early 1900s, the northern part provided iron, coal, and raw materials for a chemical industry and had plenty of hydroelectricity potential. However, from its creation in 1948, North Korea has been an inward-looking country with an economic policy advertised as isolationist self-reliance. This had a historic precedent; Korea was once called the "Hermit Kingdom." In fact, the new country depended on aid and good prices from China and the Soviet Union. These arrangements ceased in 1989. Factories became idle, and people lacked proper nutrition. By the early 2000s the GDP per capita in North Korea was one-eighth of South Korea's. In 2000 the death rate was 50 percent higher than in 1994, indicating widespread famine and disease. The North Korean economy collapsed, making the country and its government dependent on international aid. North Korea became the world's largest recipient of famine relief. The best food produced in North Korea feeds the army and party officials, while other people depend on donated food, often of lower quality.

North Korea faces a difficult period. After years of a declining economy the people, either duped by hype from their leaders or cowed by fear, do not appear likely to revolt. But they have few skills or resources to attract external foreign investment. North Korea faces three alternatives. It could continue its path to greater poverty and eventual collapse, be reunified with South Korea—although that country views the prospect with unease after Germany's experience incorporating its eastern area (see Chapter 3)—or follow a path of economic liberalization similar to that of China, take offered aid in exchange for reducing its nuclear program, and encourage investment from foreign countries. Some South Korean multinational corporations are poised to capitalize on low-wage labor and the markets for their goods in North Korea. Many South Korean families with relatives in North Korea wish to help them take advantage of better economic conditions. The North Korean government, however, has avoided following China's lead because its leaders fear losing power.

officials understand “political reform” to mean merely streamlining the bureaucracy. Even among Communist Party members, liberals vie with old-guard Maoists and free-market capitalists with leftists. Each group has its own journals and websites. Although more opinions are aired than was possible in 1989, multiparty democracy is not yet even a remote possibility.

In 2002 major changes in the governing council ushered in the “fourth generation” of leaders led by Hu Jintao (after Mao, 1949–1976, Deng Xiaoping, 1978–1995, and Jiang Zemin, 1995–2003). Having been picked by Deng while in their early forties, they are all technocrats with Communist Party and regional experience, used to working together to achieve consensus. All are dedicated to the new reforms based on an outward-looking focus and economic growth. In 2003 their influence led to new personal freedoms.

Economic Development

Attempted Geographic Shifts, 1949–1976

The Communist government tried to expand output rapidly, but the Great Leap Forward and the Cultural Revolution interrupted progress. Attempts were also made to distribute economic activities more evenly through the country to increase equality within China and enhance national defense. In 1949 the northeast, together with Shanghai and Tianjin, produced 70 percent of national output. The proximity of the northeast to Japan and the Soviet Union, and the coastal vulnerability of Shanghai, caused the Chinese government to move the production of military goods inland.

The policy of wider diffusion had an ideologic, as well as practical, basis. The Communist Party leadership wished to demonstrate that past locations and concentrations of industry depended on the flawed precepts of the capitalist system and foreign intrusions. Factory locations close to raw material sources had better economic foundations. From the mid-1950s, new manufacturing enterprises moved to regions with local coal, hydroelectricity, oil deposits, or strategic factors. However, many of the factories built in the interior proved hugely expensive to run.

Despite the new thrusts of policy and the powers possessed by the central government to make changes, the main centers of manufacturing production remained in the northeast. Central and western interiors and southern China developed slowly through this period because of political disruptions and poor transportation linkages to new industrial centers.

Changing Directions after 1976

In 1978 China’s total economic output was lower than South Korea’s or Taiwan’s had been in the 1960s. Deng Xiaoping’s major changes in outlook and policy began with a new approach to rural life and encouraged investment from foreign countries and corporations with a view

to increasing manufactured exports. China’s total economy multiplied sixfold within 20 years.

After 2000, China experienced a further revolution based on the use of the Internet and mobile phones. Its telecommunications system was upgraded in the 1990s by a fiber optic grid laid across the country. That made possible an increase in telephone lines from fewer than 10 million in 1990 to 125 million in 2000, when 2 million were being laid each month. Mobile phone users multiplied from 5 million in 1995 to nearly 800 million in 2010, making China the world’s largest user of cellphones. However, the lack of a national payment system for buying goods online, the continued state control and policing of website commerce, and sensitivity about website content delay wider use of the Internet.

Chinese economic development does not conform to the pattern followed in other countries, where economic growth began with the production of raw materials and food for export and moved to simple manufactured goods before more sophisticated ones and a range of service industries. China already produces all types of goods in all economic sectors, from rice, rag diapers, and plastic toys to microchips, and spans the entire value chain.

Farming and Rural Living in the 2000s

Agriculture remains prominent in the Chinese rural economy. Despite farming being given low priority by government and being separated from other aspects of the economy through the Mao Zedong years, in 1980 agriculture still employed almost the entire—and growing—rural workforce. Low levels of mechanization demanded high labor inputs (Figure 5.28).

By 2000, only half of the rural workers were in farming. From the early 1980s, commune controls were relaxed, and individuals and groups could plan their own programs. The personal involvement, longer-term contracts, and lower quotas to be fulfilled before selling on the open market led to growing confidence and higher output. New rural sources of income through the township and village enterprises (TVEs) took underused rural labor and offered higher wages. Over 130 million employees, making up over 30 percent of the rural workforce, worked in the TVEs. Initially this expansion grew out of collectively owned enterprises, rising from 22 to 36 percent of all Chinese industrial output by the late 1980s. After that, individual and private enterprises became the new driving forces in rural industrial expansion. Millions of people remained in industrializing rural areas instead of moving to the cities. However, many millions more moved out of rural areas to become a growing migrant population in the country’s cities.

China attempts to feed 21 percent of the world’s population from 7 percent of the world’s arable area. Farming is both land- and labor-intensive, and output per unit of land is high. Much agricultural land is cropped two or three times per year, and competition is increasing between



FIGURE 5.28 China: Rice Paddy Near Yichang, Chang Jiang (Yangtze River) Valley. A water buffalo and plow preparing land for planting rice and other paddies already planted. The older house that was used for both humans and animals has been augmented by a new home for the farmer's family—with a similar traditional structure. Although Chinese farmers include the poorest people, many have experienced better incomes in the last 20 years. Photo: © Michael Bradshaw.

land-intensive crops—wheat, corn, soybeans, and cotton in the north and rice and sugarcane in the south—and labor-intensive crops that produce greater value per unit of land, such as vegetables and fruit. Patterns of farm production move toward more complex land uses, such as the integrated planting of mulberry, sugarcane, and bananas around fishponds in the Zhu Jiang delta. Growth in the textile industry led to a huge demand for cotton. By 2004, extra planting had led to oversupply and falling prices. Meat and milk production continue to be small-scale, “backyard” enterprises.

The more profitable specialist crops, including industrial crops (cotton, soybeans), fruit, and vegetables, together with livestock products, threaten the output of some traditional staples, particularly wheat and rice. While the Chinese government needs to ensure continuing grain supplies, it requires greater diversification and intensity of production. By encouraging grain growers to increase yields by using more imported potash fertilizer, China produced enough grain in the 1990s to put a surplus into storage. However, continuing population increases made greater demands on food in both quantity and quality, forcing China to increase its imports of grain and other foods. These are funded by increased exports of manufactures.

Water Resources

New projects to move water from south to north will succeed only if they are linked to efficient management of

the water (Figure 5.29). Work on the South–North Transfer Project started in 2002, but its huge costs arouse controversy inside and outside China: environments will be altered and lives disrupted. The western route needs tunnels; the central route needs a canal or aqueduct 1,240 km (770 mi.) long; the eastern route will follow established water courses that are highly polluted. In the central route, the Danjiangkou reservoir water level will have to be raised 13 m (43 ft.), with major impacts on 200,000 displaced families, deforested hills, and a lowering of water levels below the dam. Even if completed, the transfer project will be only a partial solution to the lack of water in the north. An alternative approach could begin by coordinating and testing water conservation and anti-pollution measures in local areas, but governments and their engineers prefer major projects because the proposed scale promises big results

from single-focused efforts, the bureaucratic administration is easier, and more opportunities exist for media attention.

Chinese Energy Policy

The current Chinese economic expansion places huge pressures on energy supplies, especially in electrical power. Although China ranks third in the world for producing energy (first in coal, fifth in oil, and sixth in hydroelectricity), it suffers from the high costs of distributing the fuels and electrical power over long distances. Oil and natural gas finds are mainly offshore or in the far west, distant from economic centers; coal is produced in the north and hydroelectricity in the south. The shortfall in power supplies is as high as 20 percent in the expanding southern areas. One of the major foreign investment opportunities is to expand power provision. In the early 2000s, after discussions about the proportion of profits to be allowed to foreign corporations investing in construction projects, building began on the first of around 50 power stations that will use Chinese coal and foreign capital. Although producing only 2 percent of China's electrical power in 2004, nuclear power stations will increase in significance, especially in southern coastal areas at a distance from coal supplies.

China has the world's greatest hydroelectricity potential, but even if it were all developed, it would supply just 6 percent of the country's needs. The building of the Three Gorges Dam began in 1993. Much of the dam and its ship locks were completed in 2003 (Figure 5.30a,b) and the



FIGURE 5.29 China: Potential Water Diversions. Northern China and the Huang He basin are increasingly short of water. Three potential diversions have been identified. The western routes are short, but mountainous, requiring tunnels; the central route requires a canal or aqueduct 1,240 km (770 mi.) long direct to Beijing; the eastern route follows existing channels, but their waters are polluted. Compare this map with the climate map, Figure 5.4, and the population map, Figure 5.14, to understand more fully the need for such diversions of water.

final stage was finished in 2009. This project illustrates the environmental and social issues facing major hydroelectricity projects. When complete it will generate enough electricity to save the yearly burning of 45 million tons of polluting high-sulfur coal and will improve flood protection and navigation. The dam, however, created a lake 600 km (450 mi.) long below Chongqing, and 1.3 million people were resettled. Farmers on good valley land are moved to often poorer uplands, and towns that were submerged are rebuilt on higher land (Figure 5.30c). Although questioned by environmentalists and internal advisers, this project is Chinese government policy and is on target for completion.

Coal reserves remain China's chief source of energy. They occur mainly in the northern half of the country, resulting in heavy use of the rail network and massive investment in the railcars that carry it southward. Coal

transportation takes up 60 percent of railroad capacity, and plans are in hand to build coal slurry pipelines from interior mining areas to the coast. One outcome of the Great Leap Forward and Cultural Revolution was the opening of small local mines run by villages in southern China; these now produce around half of the total output. China's mining economy has two aspects—one with large-scale, capital-intensive, and technologically-advanced mines, and another with small-scale, labor-intensive, low-technology mines. The smaller rural mines help with chronic underemployment, but their operation often lacks environmental and safety management. An estimated 10,000 Chinese coal miners die on the job every year, accounting for two-thirds of the world's coal mine deaths. Up to 80 percent of the fatalities occur in the small mines. In 2005 new laws emphasized safety procedures and equipment.



(a)



(b)



(c)

FIGURE 5.30 China: Three Gorges Dam Project, Chang Jiang (Yangtze River). (a) Three Gorges Dam, closed in 2003 and raising the water level behind it to 140 m (440 ft.) above sea level, 75 m above the downstream side. By 2004, 6 of the 18 turbines were installed and generating electricity; the dam was filled to capacity in October 2010 with the water level raised to 175 m (550 ft.) above sea level. (b) Ship locks at the Three Gorges Dam. At present there are three lifts of 25 m (80 ft.), taking around three hours to pass through the locks. An identical sequence enables ships to go in the opposite direction. (c) The impact upstream. Some of the older buildings in the city of Zhongxian (downstream from Chongqing) will be knocked down in time for the water rise, and the new city being built on higher land will be occupied. Photos: © Michael Bradshaw.

In the late 1990s China's oil industry was reorganized into two major companies, Sinopec and Petrochina, which evolved from two government monopolies. One had been responsible for refining and distribution and the other for exploration, but the new companies do both. They competed first for a large proportion of the 90,000 gas stations that were mostly owned and run by local governments,

rural collectives, or individuals. Moving before foreign corporations could get into the market in the wake of China's entry into the WTO, both companies bought up thousands of the best-situated gas stations, sometimes at ridiculously high prices. They now look to joint ventures with foreign companies, headed by BP, Exxon, Mobil, and Shell. The investment presumes more cars and trucks will be on the

roads. China is becoming a major oil importer in a limited world market and is investing in gas, oil, and hydropower ventures in countries such as Myanmar.

Growth in Chinese Manufacturing

The drive to greater efficiency and an open-door policy to encourage foreign investment led to what has been termed the “Great Leap Outward.” Today China’s manufacturing sector comprises a complex intermarriage of local enterprise, foreign multinational capital, and public ownership.

At first, government policy to relax trade control and encourage economic links to the rest of the world was a response to the need for foreign exchange to buy grain and high-tech equipment. Improving foreign exchange balances stimulated further exports and foreign direct investment. Such policies placed pressures on the publicly owned enterprises that formed the heart of Chinese industry up to 1978. From the 1980s, reduced central government subsidies and the “management responsibility system”—an industrial equivalent to the household responsibility system—placed more decision making into the hands of public enterprises. By the early 2000s, 95 percent of industrial production sold at market prices. The central government, however, now focuses its own investment on only 1 percent of existing state-owned enterprises, allowing others to be merged, taken over by workers, or go bankrupt. By the end of 2004, the remaining “flagship” state-owned enterprises reported increasing profits from transportation, coal products, oil, chemicals, and metals that partly compensated for less profitable enterprises. Requirements to provide job security and social benefits make government-owned enterprises less profitable than private firms. However, loans to failing state-owned enterprises and grandiose socialist housing projects still amount to around 30 percent of GDP.

China has its own multinational corporations and encourages them to generate more world-known brands. One such company is Qingdao Haier, centered in the coastal city of Qingdao in Shandong Province. From being a government-owned firm producing shoddy home appliances, it grew by the late 1990s to sell 15 percent of the Chinese washing machines and 33 percent of the refrigerators. It improved quality and listened to customer needs. For example, when Sichuan farmers used a washing machine to rinse soil off potatoes, the machines were adapted to prevent clogging. A small machine for washing a single change of clothing sells well in crowded urban centers. As Haier expands, however, it enters the very competitive field of television and pharmaceutical manufacture, looking to overseas markets when financial resources and qualified staff are in short supply.

The construction industry received a huge boost from reforms that made it possible for people to buy their homes. The construction of high-rise offices and hotels, new highways, new airports, factory buildings, and port facilities

impresses visitors. However, there has been much overbuilding, and there are continuing worries over rising land and house prices.

Increasing Steel Output

As rapid economic growth occurred in southern coastal China, the old industrial area of northeast China became the country’s “rust belt” (Figure 5.31). China built its heavy industrial capacity in this area in the 1950s, but few factories were updated. Output of steel products continued, but many were unmarketable because of their price or poor quality. In the 1990s, when market forces began to take over from government funding, local coal mines (20 percent of China’s total) and oil companies (33 percent of China’s total) in the northeast could not be paid for their products by the bankrupt industrial users.

Yet China’s steel industry is the world leader, producing half the world’s steel and expected to increase output by 10 percent. The 2009 production was nearly 600 million tons—six times more than runner-up Japan (88 million tons) and almost 10 times that of third-place Russia (59.9 million tons). Although mostly consumed domestically, steel from newer Chinese mills competes with U.S. and Japanese products and often undercuts them in price, causing layoffs and hardships in those countries. The Chinese steel industry, however, is fragmented as the result of central government policy of placing a steel mill in each province. It is also inefficient, with many mills incurring losses and overcapacity, and it produces mainly basic steel. China imports better steel from South Korea and Japan for the sheets used in autos and computers.



FIGURE 5.31 China: Northeast Industrial Region. The steelworks, China’s largest, at Anshan, Liaoning Province. Photo: © Colin Garratt; Milepost 92½/Corbis.

China's Auto Industry

In 2009 China was the top motor vehicle-producing country in the world, making over 13 million vehicles, and it overtook the United States as the leading auto market. Many foreign firms, among them Volkswagen, Toyota, Ford, Buick, Chevrolet, and Nissan, have established factories in the country. Not only do major U.S., European, and Japanese automakers assemble cars in China, but their parts suppliers moved into multiple Chinese factories, making China a primary global source. China is now the place to launch and develop new models (Figure 5.32). A booming economy and rising middle class have increased domestic demand for cars. In Beijing alone, 248,000 new cars were registered during the first four months of 2010. Meanwhile, Chinese automakers are seeking new markets overseas.

The Chinese auto industry is increasingly competitive, with over 120 companies that range from small firms making crude autos based on old Soviet designs and the availability of cheap parts to the most sophisticated modern vehicles. In the center of this spectrum are firms such as Wanfeng, which began in 1996 by hammering motorcycle wheels, became the world's largest seller of aluminum alloy wheels, and now produces a cheap Jeep Cherokee look-alike from local parts in a new, but basically equipped, Shanghai factory. The largest Chinese parts manufacturer, Wanxiang, employs over 30,000 and increasingly exports its products.

Expansion of Tertiary Industries

Before 1978 there was only a single state bank for all financial operations, but there are now insurance, securities, and wider banking facilities. By the early 2000s over 200 foreign banks were active, many with licenses to carry out business in Chinese currency. In particular, Shanghai's new Pudong area has seen a huge expansion of financial investment with 150 foreign institutions and the headquarters of 20 world-scale banks, together with the Shanghai Stock Exchange and Futures Exchange.

Growth also occurs in retailing, with supermarkets, shopping malls, home improvement stores, electronics outlets (from computers to cellphones and sound equipment), and auto sales doing well. In wholesale distribution, logistics control is a major area of growth: for example, FedEx has made Shanghai its Asia-Pacific hub and has doubled the flights to and from North America.

The media industry also grows, often with strong links to foreign financing and ideas. State broadcasting (TV and radio) and newspapers are subsidized but often operate at a loss because people see them as propaganda organs with boring content. In 2004 the government closed 1,400



FIGURE 5.32 China: Automaking. The General Motors launch of its Hy-Wire car at Badaling by the Great Wall, November 2004. This car features hydrogen fuel cell propulsion and other technologies of the future automaking industry. Photo: © Andrew Wong/Reuters/Corbis.

state and party newspapers and forced many periodicals to finance themselves. However, China seeks to be a global media power. It is restructuring and refocusing the main TV channels, and the state-owned Shanghai media group is expanding fast with foreign partners. The movie industry is also growing, and going to the movies is the favorite leisure occupation of urbanites.

There is still an impression among Chinese local leaders that only factories will bring income growth, but services can reduce living costs, cause less pollution, create more jobs, and support growing markets. To date, the Chinese central government supports transportation systems, the financial sector, and tourism, but it has also identified the need to raise standards in such areas as accounting, medical care, and education.

Attacking Poverty in China

Many major cities are marked by demonstrations of conspicuous consumption, but poverty—both absolute and relative—still exists. Up to the late 1970s, rural life remained harsh. In 1978 China estimated that 33 percent of its rural population (260 million people) lived below its defined poverty line. As the initial impacts of 1980s agricultural reforms doubled output and incomes, rural industries created over 100 million new jobs, and by the late 1990s the incidence of rural poverty declined from 33 to 9 percent (from 260 million to 97 million people).

As the government's emphasis in the late 1980s shifted to developing the coastal belt, economic disparities between coastal and interior places widened, so that by the

mid-1990s, the human poverty index for interior provinces was 44 percent, compared to 18 percent in the coastal provinces. Migrations of people from rural areas to cities that were unprepared for their arrival caused urban food subsidies to rise to five times the funding for rural health, education, and relief programs. Even within cities, Chinese citizens see a few people becoming very wealthy while others face increasing unemployment as publicly owned facilities close. By 2004 the proportions of poor fell to 3 percent of China's population, but this still included 30 million people. Most of the remaining poor live in

areas with few natural resources and poor infrastructure—where improvements will be more difficult. Using another measure, the numbers of hungry people in China fell from 16 to 11 percent over the decade 1990–92 to 2000–02 (194 to 142 million).

Regions and Cities in China

With such a large area, China's boundaries enclose many local regional variations (Figure 5.33). Physically, China is a country of contrasts. Culturally, the regional dis-



FIGURE 5.33 People's Republic of China: Internal Geographic and Planning Regions.