1

China at a Glance[1]

China is the world's most populated country, and also the world's fourth-largest country by geographic area, approximately the size of the United States.[2] It has undergone a significant transformation since it began moving toward a free market economy in 1976–1978. This transformation has been marked by substantial growth in China's real gross domestic product (GDP), close to 10 percent per year for 30 years.

China's development has important implications for world trade, economic growth, global prices, capital flows, and geopolitics. Recent developments in China's financial markets may open it further to foreign investment. These include:

- Since 1976, China's real GDP growth has averaged 9.5 percent per year, three times the average of major industrialized countries. The combination of one of the lowest-cost labor forces in the world, enlightened economic policies, and increasing technological prowess has contributed to China's economic rise.
- China's transition from a centrally planned economy to a free market economy, which began in 1976 after the death of Mao Zedong, has transformed China into an important force in the global markets for trade and investment.
- While China's growth path in recent decades resembles Japan's development from 1950 to 1990, due to the country's large population and geographic size, the global ramifications of China's growth are especially profound and include China's effects on world trade, economic growth, global prices, capital flows, and geopolitics.

[1] Bridgewater Associates; Bloomberg, LLC; Morgan Stanley & Co. Inc. Research; Global Insight.

[2] CIA World Factbook (June 2011).

- Since the 1990s, China has sustained positive trade and current account balances. China is an important participant in global financial markets through the investment of its substantial foreign reserves.
- China's total exports exceeded those of the United States in July 2006 and have continued to do so through 2012.

And more recently:

- China's GDP growth rate has decelerated somewhat and may continue to slow as China experiences: a gradual, not-sharp decline in GDP growth to more long-term sustainable rates. China's GDP growth in 2011 and 2012 was approximately +9.0 percent and +9.0 percent, respectively.
- Authorities in China have been asked by other developing countries to strengthen the renminbi. On June 19, 2010, China discontinued its fixed exchange rate of 6.83 renminbi per U.S. dollar. From June through December 2010, the renminbi appreciated +3.3 percent. As of May 2013, Morgan Stanley Research expected the renminbi to appreciate, with a period-end renminbi per U.S. dollar exchange rate of 5.82 in 2013.
- On October 18, 2010, China appointed Vice President Xi Jinping as Vice Chairman of the Central Military Commission, and on November 15, 2012, Mr. Xi succeeded Hu Jintao.
- As of May 2013, China held the world's largest foreign exchange reserves, worth US$3.4 trillion, or 32 percent of the world's total; Japan was second, with its equivalent of US$1.0 trillion representing 11 percent of the world's total.

Getting to Know the Chinese Language

The origin of the word *China* dates to the Qin dynasty (pronounced Ch'in), which extended for 14 years, from 221 through 207 B.C. The Qin dynasty established the first centralized imperial government in China.

The word *Cathay,* a literary term for China, can be traced to the Khitan ethnic group, an ancient nomadic tribe that lived in Northern China. Khitan, Khitai, and Khitay are all variant spellings for the name of the people of this tribe. The word *Cathay* evolved as a European naming of Khitay.

The word *Sino* means "Chinese." This word is derived from the Latin word for China, "Sinae." The official language of China is Mandarin. Other important Chinese dialects include Cantonese, Hakka, Hsiang, Wu, Min, and Kan.

Confucianism, the Cornerstone of Traditional Chinese Culture[3]

Confucius (551–479 B.C.) is considered one of the world's greatest philosophers. He was born in the feudal state of Lu, in the modern-day Shandong Province. Distressed by the constant warfare between the Chinese states and by the venality and tyranny of their rulers, he urged a system of morality and statecraft that would preserve peace and provide people with a stable and just government. Later tradition depicts Confucius as a person who made special study of ancient books, in an effort to restore an earlier social order. Among the many sayings attributed to Confucius, two of the most widely known are:

> Everything has beauty, but not everyone sees it.[4]

and

> A journey of a thousand miles begins with a step.[5]

A cornerstone of traditional Chinese culture, Confucianism is a belief system based on the Chinese cultures of the Xia, Shang, and Zhou dynasties. Confucianism was developed and elaborated by the Chinese philosopher Confucius.

Confucianism was further developed by the great Chinese philosophers Mencius (372–289 B.C.) and Xun Zi (313–238 B.C.). During the Han dynasty, the first of China's four greatest dynasties, Emperor Wu made Confucianism the orthodox doctrine of Chinese society. Throughout the Han dynasty, Confucianism was recognized as the "Han State Cult," adopting religious and ceremonial elements such as sacrifices to Confucius.

Confucianism struggled to coexist with Buddhism and Taoism during the Sui and Tang dynasties, but was restored as the official philosophy of China and flourished throughout the Song and Ming dynasties. Throughout those two dynasties and the Republic of China, Confucianism abandoned the religious and ceremonial elements established in the Han dynasty and focused entirely on the teachings of Confucius.

A revival of Confucian thought in the tenth century produced "Neo-Confucianism," a major influence in Korea during the Choson dynasty and in Japan during the Tokugawa period.

---

[3] www.religionfacts.com, www.travelchinaguide.com.
[4] Encyclopedia.com.
[5] Ibid.

The five principles that embody Confucianism are:

1. *Ren,* humaneness or benevolence
2. *Li,* ritual norms
3. *Zhong,* loyalty to one's true nature
4. *Shu,* reciprocity
5. *Xiao,* filial piety

The Five Classics are a collection of writings that represent the core of Confucianism education. They include:

1. *Shu Ching* (Classic of History), a collection of documents and speeches dating from the later Han dynasty.
2. *Shih Ching* (Classic of Odes), a collection of 300 poems and songs from the early Zhou dynasty.
3. *I Ching* (Classic of Changes), a collection of texts on divination based on a set of 64 hexagrams that reflect the relationship between yin and yang in nature and society.
4. *Chu'un Ching* (Spring and Autumn Annals), extracts from the history of the state of Lu, said to be compiled by Confucius.
5. *Li Ching* (Classic of Rites), a collection of three books on Li (ritual norms or rites of propriety).

Religion in China

The five recognized religions in China are Buddhism, Islam, Taoism, and Christianity, which in China is treated as two faiths, Catholicism and Protestantism. Each of the five has a central organization headquartered in Beijing and staffed with officials loyal to the Communist Party. All report to the State Administration for Religious Affairs, which in turn is under the central government's State Council, or cabinet. This form of religious control has a long history in China. For hundreds of years, emperors sought to define orthodox belief and appointed many senior religious leaders.

Buddhism was introduced to China from India around the first century A.D., gaining popularity and becoming the most influential religion in China after the fourth century. In the years after 2000, China had approximately 13,000 Buddhist temples.

Islam is estimated to have reached China in the mid-seventh century. The Yuan dynasty (1280–1368) witnessed the height of influence of Islam. By the year 2000, China had more than 30,000 mosques.

Catholicism was introduced into China after the seventh century, and Protestantism was introduced into China in the early nineteenth century. After 2000, there were more than 4,600 Catholic churches, 12,000 Protestant churches, and 25,000 other Christian places of worship in China.

Taoism took shape as a religion during the second century, based on the philosophy of Laozi and his work, *Dao De Jing*. As of early 2013, China had more than 5,000 Taoist temples, up from 1,500 in 1997.

Religion has long played a central role in Chinese life, but for much of the twentieth century, reformers and revolutionaries saw it as a hindrance holding the country back and a key reason for China's "century of humiliation."

In the first two decades of the 21st century, many Chinese appear to be experiencing an awakening of religious belief. In cities, young urban professionals have been turning to Christianity. Buddhism attracts the middle class, while Taoism has rebounded in small towns and the countryside. Islam is also on the rise, not only in troubled minority areas but also among tens of millions elsewhere in China.

A survey in early 2011 showed that an estimated 300 million people in China claim a faith. A broader question in another poll showed that 85 percent of the population believes in religion of the supernatural.

In 2007, then-President Hu Jintao endorsed religious charities and their usefulness in solving social problems. The central government has also sponsored international conferences on Buddhism and Taoism.

As China's only indigenous religion, Taoism's influence extends from calligraphy and politics to medicine and poetry. The religion is loosely based on the writings of a mythical person named Laozi and calls for returning to the Dao, or Tao, the mystical way that unites all of creation. As in many other religions, Taoism encompasses a broad swath of practice, from Laozi's high philosophy to a pantheon of deities: emperors, officials, thunder gods, wealth gods, and terrifying demons that punish the wicked.

For much of the past two millennia, Taoism's counterpart has been Confucianism, the ideology of China's ruling elite and the closest China has to a second homegrown religion. Whereas Confucianism emphasizes moderation, harmony, and social structure, Taoism offers a refuge from society and the trappings of material success.[6]

Overview of the Chinese Calendar

The Chinese calendar dates back to 2637 B.C. and has been an important influence on China's dynasties and culture through the ages. In the twenty-first century, the Gregorian calendar is used in the People's Republic of China for civil purposes, but the traditional Chinese calendar is still used for celebrating festivals and timing agricultural activities.

The Chinese calendar is a combination of two cycles, the Ten Celestial Stems and the Twelve Terrestrial Branches. Combining two characters from each of these cycles, years are enumerated and make up a cycle of 60 years.

[6] Ian Johnson, "The Rise of the Tao." *The New Yorker*, November 7, 2010; China.org.

Every year correlates with one of 12 animals (e.g., 2012 was the year of the dragon, and the next year of the dragon will take place in 2024). The character of the animal is considered to have an influence on the character of people born during that year. (See Figure 1.)

Sixty-Year Cycle of the Chinese Calendar

1 甲子 *jiazi*	2 乙丑 *yichou*	3 丙寅 *bingyin*	4 丁卯 *dingmao*	5 戊辰 *wuchen*	6 己巳 *jisi*	7 庚午 *gengwu*	8 辛未 *xinwei*	9 壬申 *renshen*	10 癸酉 *guiyou*
11 甲戌 *jiaxu*	12 乙亥 *yihai*	13 丙子 *bingzi*	14 丁丑 *dingchou*	15 戊寅 *wuyin*	16 己卯 *jimao*	17 庚辰 *gengchen*	18 辛巳 *xinsi*	19 壬午 *renwu*	20 癸未 *guiwei*
21 甲申 *jiashen*	22 乙酉 *yiyou*	23 丙戌 *bingxu*	24 丁亥 *dinghai*	25 戊子 *wuzi*	26 己丑 *jichou*	27 庚寅 *gengyin*	28 辛卯 *xinmao*	29 壬辰 *renchen*	30 癸巳 *guisi*
31 甲午 *jiawu*	32 乙未 *yiwei*	33 丙申 *bingshen*	34 丁酉 *dingyou*	35 戊戌 *wuxu*	36 己亥 *jihai*	37 庚子 *gengzi*	38 辛丑 *xinchou*	39 壬寅 *renyin*	40 癸卯 *guimao*
41 甲辰 *jiachen*	42 乙巳 *yisi*	43 丙午 *bingwu*	44 丁未 *dingwei*	45 戊申 *wushen*	46 己酉 *jiyou*	47 庚戌 *gengxu*	48 辛亥 *xinhai*	49 壬子 *renzi*	50 癸丑 *guichou*
51 甲寅 *jiayin*	52 乙卯 *yimao*	53 丙辰 *bingchen*	54 丁巳 *dingsi*	55 戊午 *wuwu*	56 己未 *jiwei*	57 庚申 *gengshen*	58 辛酉 *xinyou*	59 壬戌 *renxu*	60 癸亥 *guihai*

Figure 1 60 Year Cycle of the Chinese Calendar

Chinese Year	Zodiac Animal	Gregorian Calendar
4709	**Hare/Rabbit**	**3-Feb-11**
4710	Dragon	23-Jan-12
4711	Snake	10-Feb-13
4712	Horse	31-Jan-14
4713	Ram/Sheep	18-Feb-15
4714	Monkey	8-Feb-16
4715	Rooster	28-Jan-17
4716	Dog	15-Feb-18
4717	Boar	5-Feb-19
4718	Rat	25-Jan-20
4719	Ox	12-Feb-21
4720	Tiger	1-Feb-22
4721	**Hare/Rabbit**	**22-Jan-23**
4722	Dragon	10-Feb-24
4723	Snake	29-Jan-25
4724	Horse	17-Feb-26
4725	Ram/Sheep	6-Feb-27
4726	Monkey	26-Jan-28
4727	Rooster	13-Feb-29
4728	Dog	3-Feb-30

Historical Chinese Cities[7]

In Heaven, there is paradise; on earth, Hangzhou and Suzhou.

Marco Polo (1254–1324)

For centuries, the cities of Hangzhou and Suzhou have loomed large in the affections and travel plans of the Chinese citizenry.

Hangzhou

Founded approximately 2,200 years ago during the Qing dynasty and through the centuries a center of meditative, poetic, and spiritual significance, Hangzhou is one of the Seven Ancient Capitals of China. Hangzhou, whose city walls were not built until the Sui dynasty in 591 A.D., sits at the southern end of China's Grand Canal, the world's longest canal. It was the capital of several kingdoms, including the Wuyue Kingdom during the Five Dynasties and Ten Kingdoms Period, and the Southern Song dynasty.

With its tea and silk industries, and its temples and pagodas adorning quiet hilltops, Hangzhou remained an important port through the middle of the Ming dynasty.

Figure 2 Location of Hangzhou

[7] www.travelchinaguide.com, http://rightsite.asia/en.

Figure 3 Skyline of Modern Hangzhou
Courtesy of Andy Brandl.

Hangzhou remains relevant today:

- Hangzhou is a major city located in the Yangtze River Delta region, and it is the capital of Zheijiang province in eastern China.
- In 2013, Hangzhou had a population of 8,700,000.
- In 1993, the Chinese government established the Hangzhou Economic and Technological Development Zone to encourage industries including electronic information, biological medicine, machinery manufacturing, and food processing.
- Hangzhou operates an international airport, the Hangzhou Xiaoshan International Airport and a thriving river port, the Hangzhou Port.
- Possessing near mythical status in Chinese cultures, Hangzhou is a popular tourist destination and it has been frequently ranked as one of China's 10 most scenic cities.

Suzhou

Dubbed the "Venice of the East," or the "Venice of China," Suzhou is one of the oldest towns in the Yangtze Basin.

Suzhou dates back 2,500 years, to the late Zhou dynasty, and was established by the Wu, who formed villages along the edges of hills above the wetlands surrounding Lake Tai. In 514 B.C., during the Spring and Autumn Period of the Zhou dynasty, King Helu named Suzhou the "Great City of Helu," and established it as his kingdom's capital city. Since then, historic Suzhou has largely remained unchanged.

Known as "Wu County" throughout the Qin dynasty, Suzhou served as the location of Xiang Yu's historical uprising that contributed to the overthrow of the Qin regime. Suzhou's name was later restored during the Sui dynasty in 589 A.D.

Upon completion of the Grand Canal, Suzhou found itself strategically located on a major trade route, making Suzhou a hub of industry, trade, and commerce.

Figure 4 Location of Suzhou

A city within the Yangtze River Delta region, Suzhou has modernized while maintaining its cultural and historical significance in Chinese history.

- In 2013, Suzhou had a population of 10,549,100.
- In the 1990s, the Chinese partnered with Singapore to establish several economic development projects, including the Suzhou Hi-Tech Industrial Development Zone, which as of early 2013 hosted over 1,500 foreign companies, 40 of which are Fortune 500 companies.
- Suzhou is a popular tourist destination and receives many visitors each year.

The First Five Special Economic Zones of China[8]

Following the end of the Mao era in 1978, Deng Xiaoping became the Paramount Leader of China and initiated broad economic reforms. He envisioned China as a country more open to the outside world and economically robust. He encouraged foreign trade and investment through joint ventures and aimed to increase foreign investment.

[8] "Quick Guide: China's Economic Reform," BBC News, November 3, 2006, www.china.org.cn.

Figure 5 Location of Five Special Economic Zones

To accomplish this goal, he created special economic zones (SEZs) in southern China on September 6, 1980. The SEZs were Shenzhen, Xiamen, Shantou, Zhuhai, and the entire province of Hainan. Deng Xiaoping envisioned these SEZs as incubators of capitalism.

The key benefit of the SEZs to foreign investors was favorable tax advantages and government regulations. In 2010 at the 30th Anniversary of the SEZ, then-President Hu Jintao noted that "China will always support the SEZs and remember their roles as 'first movers.'"

Shenzhen, "The City of Ambition"[9]

Literally meaning "deep drains," Shenzhen was a nondescript fishing village located alongside several rivers and streams until Paramount Leader Deng Xiaoping declared the city an SEZ on September 6, 1980.

Shenzhen, a Pearl River Delta city whose roots trace back to the Ming dynasty, was selected by Deng Xiaoping as an SEZ because of its close proximity to Hong Kong, a then-prosperous British territory. Since 1980, Shenzhen has blossomed into one of China's burgeoning economic power

[9] www.szse.cn, www.world-exchanges.org, www.ship.gov.cn, http:/english.sz.gov.cn, www.scmp.com, www.trueknowledge.com.

centers and has been called the "City of Ambition." In 2012, Shenzhen had an estimated population of approximately 12.5 million and a gross domestic product of 1.3 trillion yuan (US$210 billion).

Shenzhen has evolved from a small fishing community into one of China's most vibrant economic zones. Among several prominent economic developments, two of the most notable are:

- **Shenzhen Stock Exchange (SZSE).** Founded on December 1, 1990, 10 years after Shenzhen was declared an SEZ, the Shenzhen Stock Exchange is one of China's three stock exchanges and has ranked as the seventh-largest exchange by market capitalization out of the 16 major exchanges in the Asia-Pacific region. As of December 31, 2011, the SZSE had 1,420 companies listed on its exchange, with a stock market value of US$1.0 trillion. The SZSE also operates the SME Board and ChiNext, two subexchanges catering to specific securities.
- **Shenzhen Hi-Tech Industrial Park (SHIP).** Founded in September 1996, the Shenzhen Hi-Tech Industrial Park covers an area of 11.5 square kilometers and encourages the biotechnology/pharmaceutical, building and construction, chemicals, medical equipment, telecommunications, and electronics industries. SHIP also established the Shenzhen Software Park to encourage the software industry. SHIP has attracted high-tech, multinational companies including IBM, Philips, Olympus, Epson, Lucent, Harris, and Thomson.

Other Notable Chinese Cities[10]

The cities described in the following sections have been chosen because of their size, economic vibrancy, and/or historical and cultural significance.

Chengdu (Sichuan Province)

- Population (2011): 14.0 million.
- Dating back to the fourth century B.C., Chengdu was the capital of several ancient dynastic kingdoms.
- In 1279, the Mongols sacked the city, killing 1.4 million inhabitants.
- Chengdu was the birthplace of the first widely used paper money in the world.
- Chengdu is the home of the Chengdu Research Base of Giant Panda Breeding.
- Chengdu's main industries include food, medicine, machinery, and information technology.
- Chengdu is one of the preferred cities for investment in western China; 135 of the world's 500 largest companies multinational enterprises had subsidiaries or branch offices in Chengdu as of 2013.

[10] ChinaToday; wikipedia.org.

Chongqing (Direct-Controlled Municipality)

- Population (2012): 29.8 million.
- Chongqing served as China's wartime capital during the Second Sino-Japanese War.
- In 1997, Chongqing was named one of China's four directly controlled municipalities (the highest ranking level for cities in China; the other three directly–controlled municipalities are Beijing, Shanghai, and Tianjin).
- In 2005, Chongqing was named one of China's Five National Central Cities, the others being Beijing, Guangzhou, Shanghai, and Tianjin.
- Chongqing serves as a manufacturing center and transportation hub for Southwest China, with its main industries including iron, steel, and aluminum production, motor vehicle production, and mining.

Dalian (Liaoning Province)

- Population (2011): 6.8 million.
- Dalian has been controlled by several countries, including Britain in 1858, China in the 1880s, Japan in 1895 during the first Sino-Japanese War, and the Soviet Union following World War II.
- One of China's key ports located in Dalian is Port Arthur (now named Lushun), named after Prince Arthur, Queen Victoria's son.
- Dalian Beach is 31 kilometers (18 miles) in length and serves as a popular summer destination.
- Dalian's main industries include machine manufacturing, petrochemicals, oil refining, and electronics.

Nanjing (Jiangsu Province)

- Population (2012): 8.2 million.
- Meaning "Southern Capital," Nanjing served as China's economic, cultural, and political capital through several modern historical periods, including the period up to the Chinese Civil War in 1949.
- Surrounded by the Yangtze River (a strategic trade gateway) and mountains, Nanjing boasts beautiful natural scenery.
- During the Tang and Song dynasties, Nanjing was a place where poets gathered and composed poems.
- Nanjing's main industries include electronic information, machinery, materials, biopharmaceuticals, and pharmaceuticals.

Harbin (Heilongjiang Province)

- Population (2012): 11.3 million.
- An extension of Russia's Trans-Siberian Railway, the Chinese Eastern Railway (constructed in 1898) connected Harbin to other port cities,

transforming Harbin from a small fishing village into an industrial metropolis.
- Harbin became a major center of émigrés following the Russian Civil War and during Nazi Germany.
- Known for its long winters, which usually last seven months, from October to April, Harbin hosts the annual Harbin International Ice and Snow Sculpture Festival.
- Called "black earth," the soil of Harbin is among the most nutrient-rich in China.
- Harbin's main industries include textile-related crops, commodity grain production, and agricultural businesses.

Hohhot (Inner Mongolia)

- Population (2012): 3.0 million.
- Hohhot serves as the capital of the Inner Mongolia Autonomous Region.
- The majority of Hohhot residents speak the Hohhot dialect and understand Mandarin.
- Tongdao Road, a major street in the old town area, is decorated with Islamic and Mongol exterior designs on many of the buildings.
- Naadam, a Mongolian summer festival held annually in mid-August, features traditional Mongolian sports including wrestling, horse racing, camel racing, and archery.
- Hohhot's main industries include wool and leather goods, building materials, iron and steel products, and fertilizer.

Qingdao (Shandong Province)

- Population (2012): 9.4 million.
- Due to its location on the Shandong Peninsula, Qingdao is a major industrial city and foreign trade port. It is also a popular location for health resorts, due to its mild climate, beaches, and verdant green hills.
- Identified as a strategic port, Qingdao was a German colonial concession from 1898 to 1914, following a brief political conflict.
- Upon gaining control of the area, the Germans outfitted the fishing village with wide streets, electrification, a sewer system, and safe drinking water supplies.
- Qingdao's main industries include mineral water, wine, and Tsingtao beer.

Xiamen (Fujian Province)

- Population (2012): 3.6 million.
- Also known as Amoy, Xiamen and the surrounding countryside are famous for being an ancestral home to many overseas Chinese.

- Xiamen was China's main port for exporting tea in the nineteenth century.
- The local dialect is Amoy, also known as Hokkien, and has had a major influence on how certain Chinese terms were translated into Western languages: *tê* became known as "tea" and *kiô-chap* became known as "ketchup," in English.
- In 1980, Xiamen was named one of the five SEZs in China by the then Paramount Leader Deng Xiaoping.
- As a result of being named an SEZ in 1980, Xiamen has built up a highly developed banking sector, with the presence of over 600 financial institutions.
- Xiamen's main industries include financial services, fishing, shipbuilding, food processing, tanning, textiles, machine tool manufacturing, and telecommunications.

China's Five National Central Cities, Emerging Cities, and Growing Middle Class

In 2005, the Ministry of Housing and Urban-Rural Development designated Beijing, Chongqing, Guangzhou, Shanghai, and Tianjim as China's Five National Central Cities (see Table 1). These cities are charged with leading and developing China economically, politically, and culturally.

The Global Urban Competitiveness Project, a partnership among professors and scholars in the United States, Canada, China, Britain, the Netherlands, Mexico, Italy, and Japan, among other countries, published the "Global Competitiveness Report 2009–2010" in July 2010, ranking the world's top 500 cities in terms of competitiveness. Their metrics included the size and growth of a city's economy, output per person and per square kilometer, international patent applications, and the presence of multinational corporations. The top three cities were New York, London, and Tokyo, respectively. Of the 500 cities ranked, 65 were Chinese. As shown in Table 2, Chinese cities have been increasing in global competitiveness.

In their study of emerging market cities in November 2010, "Winning in Emerging Market Cities," the Boston Consulting Group (BCG) reported that in 2005, a company had to have operations in 60 Chinese cities to reach 80 percent

Table 1 China's Five National Central Cities

City	2009 GDP (US$ Bn)	2009 Population (Million)	Area (km^2)	Region
Beijing	173.7	16.3	16,808	North
Chongqing	95.6	28.2	82,300	Southwest
Guangzhou	133.4	7.8	7,434	South Central
Shanghai	218.2	18.6	6,340	East
Tianjin	109.8	11.2	11,303	North

Source: Economist Intelligence Unit.

Table 2 The Most Competitive Cities in the World

City	2009–2010 Ranking		2007–2008 Ranking
Hong Kong	10	↑	11
Shanghai	37	↑	46
Beijing	59	↑	68
Shenzhen	71	↑	69
Macao	93	↑	98
Guangzhou	120	↑	119
Tianjin	165	↑	185
Dongguan	195	↑	214
Dalian	218	↑	234
Foshan	219	↑	223
Suzhou	221	↑	243
Chengdu	222	↑	236
Hangzhou	223	↑	222

Source: Global Urban Competitiveness Report (2009–2010), www.gucp.orglon.

of China's middle class, but by 2020, a company will have to have operations in 212 cities to reach 80 percent of China's middle class. According to BCG, income levels of the residents living in these emerging cities will likely rise, leading to a growing middle class through 2015 and beyond (see Figure 6).

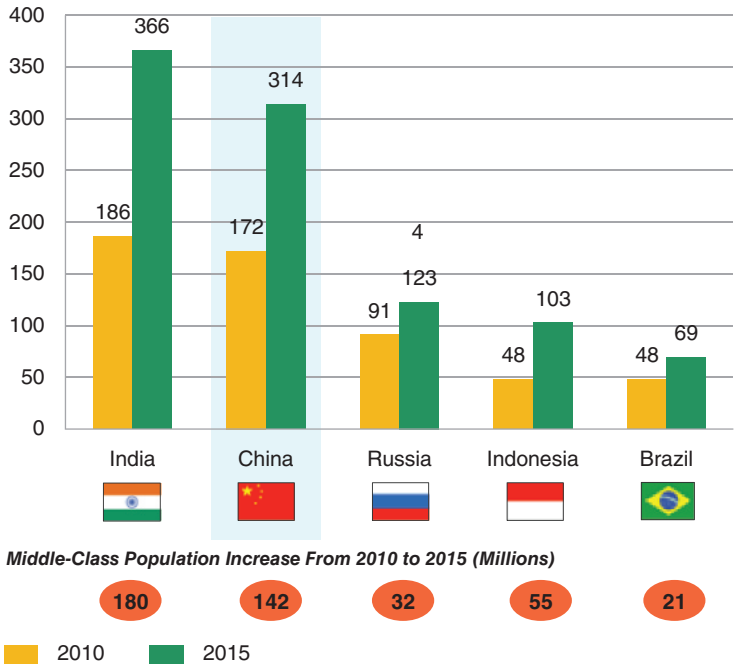


Figure 6 Middle-Class and Above-Middle-Class Populations (Millions)

Sources: Economist Intelligence Unit; Brazilian Institute of Geography and Statistics (IBGE); Instituto Nacional de Esadistica y Geografía (INEGI); BCG China 2010 population and income forecast database; National Council of Applied Economic Research (NCAER); "The Great Indian Middle Class," 2004 BCG Analysis.

Transportation in China

Among the factors catalyzing China's economic growth over the past three decades have been the century's significant investments in its rail and air transportation infrastructure, continuing an emphasis that in earlier centuries found expression in China's Grand Canal undertaking.

The Grand Canal[11]

The Grand Canal in China is the longest canal or artificial river in the world. Beginning in Beijing, it passes through Tianjin and the provinces of Hebei, Shandong, Jiangsu, and Zhejiang to the city of Hangzhou. The Grand Canal was built during the Sui dynasty (581–618 A.D.), with various earlier sections dating back to the fifth century B.C. The Grand Canal's total length is 1,776 km (1,103 miles). The canal's highest elevation is 42 meters (138 feet), located in the mountains of Shandong province.

According to historians, the development of the Grand Canal during the Sui dynasty was attributed to the migration of China's core economic and agricultural region, which moved from the Yellow River Valley to the present-day Jiangsu and Zhejiang provinces. As such, the Grand Canal's main role throughout the Sui dynasty was the transport of grain from the agricultural region in southern China to the capital-city region in northern China. With the recorded labor of five million men and women under the supervision of Ma Shumou, the first major section of the Grand Canal was completed in the year 605 A.D. The Grand Canal was fully completed under the second Sui emperor, from 604 to 609 A.D. Post offices supporting a courier system and an imperial roadway ran alongside the Grand Canal.

Located near the Grand Canal, Yangzhou (Jaingsu province) remained a vibrant economic zone through the Tang dynasty (618–907 A.D.), despite Chang'an serving as the dynasty's capital city.

From the Tang to the Qing dynasties, the Grand Canal transported mainly grain, among other commodities. As it served as the main artery between northern and southern China, the Grand Canal facilitated the development of an economic belt from the northern part of the country to its southern regions. From the founding of the People's Republic of China (1949) to early 2013, the Grand Canal transported primarily bulk goods including bricks, gravel, sand, diesel fuel, and coal.

---

[11] Encarta Encyclopedia; Patricia Buckley Ebrey, *The Cambridge Illustrated History of China* (Cambridge, UK: Cambridge University Press, 1999); John King Fairbank and Merle Goldman, *China: A New History; Second Enlarged Edition* (Cambridge, MA: Harvard University Press, 2006); Charles Benn, *China's Golden Age: Everyday Life in the Tang Dynasty* (Oxford, UK: Oxford University Press, 2011); Joseph Needham, *Science and Civilization in China: Vol. 4. Physicals and Physical Technology, Part 3, Civil Engineering and Nautics* (Caves Books, 1986).

The Grand Canal has also facilitated cultural exchange and political integration between northern and southern China.

China's High-Speed Rail Passenger System[12]

China's high-speed rail network (HSR) is considered the world's most ambitious public-works project, a twenty-first-century equivalent of America's Interstate Highway System.

Defined as a train traveling with an average speed of at least 200 km/h (124 mph), high-speed rail systems are used as means of faster travel, mainly throughout Europe, most notably in Spain, France, Germany, and Italy; and in Asia, most notably in China, Japan, and Taiwan.

- In 2008, China had only 649 km (403 miles) of high-speed railways; as of April 2011, China had 8,400 km (5,220 miles), four times as much as the next-largest work (Japan). By 2012, China had expanded the network to cover 9,356 km (5,813 miles), and planned further expansion to 50,000 km (31,069 miles) by 2020.
- As of May 2011, China operated the world's fastest high-speed rail train, reaching 350 km/h (217 mph) on parts of the country's rail network.
- In December 2010, China's high-speed rail passenger train established a new world record, traveling at 486 km/h (302 mph) during a test run of the link between Beijing and Shanghai.
- China's network links Shanghai, China's economic hub, to Hangzhou, the capital of East China's Zhejiang Province, among other connections between cities. As of early 2011, the nine-stop trip from Shanghai to Hangzhou took 45 minutes and cost 98 yuan (US$14.73) for coach, and 156 yuan (US$23.45) for first class.
- The Beijing-Shanghai line, a 1,318-km rail line that cost 220.9 billion yuan (US$33.2 billion) was opened in 2012.
- Although the network provides affordable travel for some Chinese, tens of millions of poor migrants who work far afield and flock home for the Chinese New Year cannot afford to travel via the rail system and instead use the bus system.

On May 15, 2011, Morgan Stanley Research published a 63-page report, "China High-Speed Rail: On the Economic Fast Track," which provided an

[12] Morgan Stanley & Co. Inc. Research, "China High-Speed Rail: On the Economic Fast Track," May 15, 2011; "Off the Rails?" *The Economist*, April 2, 2011; *Time* Magazine, www.time.com; "High Speed Around the World Maps," *International Union of Railways*, December 2010, www.uic.org; "China Unveils Shanghai-Hangzhou High-Speed Railway; Eyes Network Extension," *Xinhua News Agency*, October 26, 2010; "China Unveils World's Fastest High Speed Train," *Huffington Post*, December 3, 2010.

overview of the largest transportation infrastructure project in history and the implications for 12 industries within China: tourism, restaurants, hotels, budget hotels, consumer staples, consumer discretionary, property, railway rolling stock, railway infrastructure, toll roads, aviation, and car rental.

China's HSR Highlights	
Railway Network	7,431 km (4,617 miles)
Operating Speed	350 km/h (217 mph)
Test Speed	486 km/h (302 mph)
Network in 2012	13,000 km (8,078 miles)
Network by 2020	16,000 km (9,942 miles)

China's Airports[13]

As of early 2013, China had approximately 500 airports, over 440 of which were paved. Table 3 compares this to other countries.

- In 2011, China ranked 15th in the world in the number of airports.
- Ranked the second-busiest airport in the world as of May 2011, the Beijing Capital International Airport served 11 domestic and 55 foreign airline companies.
- In 2011, Beijing Capital International Airport's traffic was 78 million passengers. In 2009, it accommodated 65.3 million passengers, six years ahead of schedule. In 2012, the airport accommodated more than 90 million passengers.

Table 3 Country Comparison: Airports

Rank	Country	# of Airports
1	United States	15,079
2	Brazil	4,072
3	Mexico	1,819
4	Canada	1,404
5	Russia	1,213
6	Argentina	1,141
7	Colombia	990
8	Bolivia	881
9	Paraguay	800
10	Indonesia	684

Source: CIA World Factbook (June 2011). Data are as of 2010.

[13] CIA World Factbook (June 2011); www.chinahighlights.com, *Airports Council International*: "Final Airport Traffic Results for 2009," March 2010; "Year to Date Passenger Traffic August 2010," November 2010; www.travelchinaguide.com.

- Beijing Capital International Airport has operated since 1958 and as of May 2012 offered over 5,000 scheduled flights to 88 cities in China and 69 cities abroad.
- The airport has three terminals: Terminal 1, opened in 1958; Terminal 2, in 1999; and Terminal 3, in 2008.
- As of mid-2013, Beijing Capital International Airport was one of the world's most technologically advanced airports, equipped with state-of-the-art systems, security, and baggage-handling facilities.

Evolution of Modern Chinese Paper Currency[14]

The first series of the renminbi was introduced on December 1, 1948, the day the People's Bank of China was established in Shijiazhuang, Hebei Province. The renminbi was titled "the People's Currency."

The second series of the renminbi was introduced on March 1, 1955, bringing an end to the first series of the renminbi. With the introduction of the second series, the Chinese moved the decimal point of its currency four places to the left; as a result, a first series ¥10,000 note became equivalent to a second series ¥1 note.

The third series of the renminbi was introduced in 1962. Unlike the second-series renminbi, the third series did not replace its predecessor, as the second-series renminbi continued to be used. The third series used vivid colors, was smaller in size than the second series, and had distinct national themes, an unconventional border design, and embroidered Zhuang text.

The fourth series of the renminbi was introduced on April 27, 1987. The fourth series circulated alongside the third series, and its exchange rate with the third series was 1:1. It included security features such as watermarks, magnetic ink, and fluorescent ink.

The fifth series of the renminbi was introduced on October 1, 1999. Initiated by Prime Minister Zhu Rongi, the introduction of the fifth series of the renminbi aimed to facilitate economic growth, provide better security, and commemorate the 50th anniversary of the People's Republic of China. As of early 2013, the fifth series of the renminbi was the current currency in circulation throughout China.

China's Political System[15]

China's 34 provincial-level governments include 23 provinces, 5 autonomous regions, 4 municipalities, and 2 special administrative regions.

---

[14] Show China, www.showchina.org.

[15] Morgan Stanley Wealth Management Investment Strategy; Michael F. Martin, "Understanding China's Political System," *Congressional Research Archive*, April 14, 2010; US-China Business Council; the China Business Review; People's Daily Online.

The Communist Party of China (CPC)

Formally established on July 20, 1921, in Shanghai, the CPC began as a Marxist-Leninist party organized into small groups that operated on the principle of "democratic centralism."

The contemporary CPC is organized into a hierarchal network of organizations that reaches into many aspects of Chinese society. The CPC has affiliations with universities and schools, think tanks, state-owned enterprises, private corporations, and foreign-owned companies, among other institutions.

The CPC's most powerful policy and decision-making entity is the Political Bureau (Politburo). The Politburo Standing Committee consists of a smaller group of elite party members that wields much of the political power in China. The president and vice president preside over China's government. As of mid-2013, the president and vice president were Xi Jinping and Li Yuanchao, respectively. The general secretary has historically been the highest position in the CPC; generally, the general secretary of the CPC is also the president of China.

The State Council (Chinese Government)

The State Council, along with its ministries, bureaus, commissions, and agencies, serves as the administrator and regulator of China's day-to-day government functions. The Premier of the CPC runs the State Council. The Premier is also a member of the Politburo Standing Committee, emphasizing the interconnection between the CPC and the Chinese government. As of mid-2013, the Premier was Li Keqiang.

China's government is essentially divided into two parts: a system of ministerial organizations, including the Ministry of Foreign Affairs and the Ministry of Commerce, among others; and a system of geographic organizations, including provincial, municipal, county, and township and village governments.

As of mid-2013, China had 34 provincial-level governments; over 300 prefecture-level governments; over 3,000 county-level governments; and over 40,000 township-level governments. Although China's constitution does not outline the division of power among the various tiers of government, each tier of government reports to the tier of government above it.

Other Institutions (Interconnected with the CPC and the State Council)

The People's Liberation Army (PLA)

Established on August 1, 1927, the People's Liberation Army (PLA) is China's unified military organization, responsible for all air, land, and naval forces. As of early 2011, the PLA was the largest military force in the world, with over two million citizens on active duty. The two Central Military Commissions

(CMCs), a state entity and a party entity, are responsible for military policy and decisions. The party CMC is chaired by the CPC general secretary, symbolizing the prerogative of military leadership.

The National People's Congress (NPC)

The National People's Congress (NPC) is China's unicameral legislative body. The NPC meets annually for about two weeks to officially set government policy and select China's leadership.

As of early 2013, the NPC had approximately 3,000 members, 70 percent of whom were in the CPC and 30 percent of whom were in other parties, including the United Front Democratic Party. As of early 2013, the NPC had a standing committee of approximately 150 members.

The CPC approves all selected, not popularly elected, NPC candidates and overseas the election process.

The Supreme People's Court

The Supreme People's Court is responsible for civil, criminal, and administrative cases, as well as appeals. It reports to the NPC and the NPC Standing Committee.

The chief justice (also named the president) of the Supreme People's Court is appointed by the NPC and can remain in office for no more than two successive terms, each of which is five years. Other deputy presidents and judges are appointed by the NPC Standing Committee.

Another judicial body, the Supreme People's Procuratorate, supervises the application and enforcement of the law.

The Legacy of Deng Xiaoping[16]

> The Maoist Who Reinvented Himself, Transformed a Nation, and Changed the World
>
> ***Time* magazine**

Mr. Deng was the paramount leader of the People's Republic of China from 1978 to 1992, and he is credited with steering China away from its Lenin-like, Maoist organizational philosophy into a wider world of technological growth and international trade.

Mr. Deng's rise as a political figure in China was a long and trying one: he was purged twice by the CPC during the Cultural Revolution for promoting economic policies that differed from those of Chairman Mao Zedong; and he later regained prominence when he was appointed the Paramount Leader of the CPC in 1978 by outmaneuvering Mao's chosen successor, Hua Guofeng.

---

[16] "60 Years of Asian Heroes," *Time*, November 13, 2006.

Despite serving as the paramount leader, Mr. Deng never held office as the head of state, head of government, or general secretary of the CPC (historically the highest position in Communist China).

Mr. Deng believed that China needed to separate from its Maoist mold of state control, that China needed to encourage its long-dormant entrepreneurial spirit, and that China needed to open up to capitalism, whatever the political fallout. He often said, "It does not matter if a cat is black or white, so long as it catches mice."

Under his leadership, China focused on the "Four Modernizations" set forth by Zhou Enlai in 1963: agriculture, industry, national defense, and science and technology. In addition to his policy changes in economics, Mr. Deng loosened the controls placed by Mao Zedong on filmmaking, fashion, music, and the visual arts.

Former Leaders of the Communist Party of China[17]

Former President Hu Jintao

Born in December 1942, President Hu Jintao, an ethnic Han native of Jixi, Anhui Province, joined the CPC in April 1964 and until late 2012 was the paramount leader of the People's Republic of China.

Mr. Hu's political philosophy can be summarized by two phrases: "harmonious society" and "peaceful development." To achieve the former, Mr. Hu established the "Scientific Development Concept," China's official socioeconomic ideology that aims to solve its economic, environmental, and social problems.

Mr. Hu also developed China's core value system, called "Eight Honors and Eight Shames." This moral code is used as a guideline for the Chinese, and slightly differs from the ones established by Mao Zedong and Deng Xiaoping, in that for the first time it focuses on codifying moral standards as opposed to setting social or economic goals.

One of Mr. Hu's power bases has been the Communist Youth League of China.

Mr. Hu studied engineering at the Water Conservancy Engineering Department of Tsinghua University. He is married to Liu Yongqing and they have two children together.

Former Prime Minister Wen Jiabao

Born in September 1942, Prime Minister Wen Jiabao, an ethnic Han native of Tianjin, joined the CPC in September 1967 and until late 2012 was the

---

[17] Photos of Hu Jintao and Wen Jiabao, http://english.peopledaily.com; Geoff Dyer, "Who Will Be China's Next Leaders?" *Financial Times*, March 5–6, 2011; China Internet Information Center; www.china.org.cn; Robert Lawrence Kuhn, *Hu's Political Philosophies*, by March 13, 2010.

sixth premier of the State Council of the People's Republic of China. Mr. Wen has been regarded as China's leading figure behind its economic policy, as a member of the Politburo Standing Committee of the CPC.

Soft-spoken and known for his strong work ethic, Mr. Wen has advocated for a more balanced approach in developing China's hinterland regions, and he played a key role in China's response to the 2007–2009 global financial crisis and its subsequent stimulus programs.

Mr. Wen accompanied former General Secretary Zhao Ziyang to Tiananmen Square during the 1989 Tiananmen Square protests, and unlike Mr. Zhao, who was punished by house arrest for the rest of his life, Mr. Wen was later promoted to vice premier under his mentor, Zhu Rongji.

Of the senior CPC leaders, Mr. Wen has been very popular with the public. He has consistently spent time over the New Year holidays in poor, rural areas, referring to himself as "Grandpa Wen."

Mr. Wen studied geological surveying and prospecting at the Beijing Institute of Geology. He is married to Zhang Peili, a jewelry expert and investor, and they have a son together.

China's Transition of Party Leaders

	2012	2013
President Hu Jintao's Transition Timeframe	Stepped down as Communist Party Chief late in the year	Presidential term ended in March
	2012	2013
Prime Minister Wen Jiabao's Transition Timeframe	Stepped down from the Communist Party's Politburo Standing Committee	End of Premiership term

Leaders of the Communist Party of China[18]

President Xi Jinping

Born in June 1953, President Xi Jinping, son of a former revolutionary leader imprisoned by Mao Zedong, joined the CPC in 1974. In October 2010, Vice President Xi Jinping was appointed vice chairman of the Central Military Commission of the CPC, signaling that Mr. Xi would be the likely successor of the then party chief, President Hu Jintao.

President Xi Jinping has been viewed as a moderate who appears to be particularly engaged on key economic and strategic issues involving China

[18] Geoff Dyer, "Who Will Be China's Next Leaders?" *Financial Times*, March 5–6, 2011; "China Grooms a New Leader, Politically Deft, if Little Known," *Wall Street Journal*, January 24, 2011; "China Anoints Its Next Leader," *Wall Street Journal*, October 17, 2010; "Xi's Career Gives Few Clues to His Beliefs," *Wall Street Journal*, October 19, 2010; "China's Li Delivers A Polished Future," *Forbes*, January 28, 2010.

and the world. At age 15, he was sent to work among peasants in the yellow hills of Shaanxi province. He stayed seven years in the village of Liangjiahe, which eventually named him party secretary.

As party secretary in Guangdong province during the 1980s, he was instrumental in the development of the SEZ in Shenzhen, the city near Hong Kong that became the symbol of China's economic take-off.

A self-confessed fan of American movies, particularly World War II movies, Mr. Xi was named one of the most influential people in the world in the 2009 Time 100 list.

Mr. Xi Jinping studied chemical engineering at Beijing's prestigious Tsinghua University. Mr. Xi is a so-called princeling, a descendant of a member of the revolutionary party elite, and his second marriage is to a celebrity folk singer and army major general, Pen Liyuan. Mr. Xi was first married to Ke Xiaoming, the daughter of China's ambassador to the United Kingdom in the late 1970s. They have a daughter enrolled at Harvard University as of early 2013.

Premier Li Keqiang

Born in July 1955, Premier Li Keqiang, an ethnic Han native of Dingyuan, Anhui Province, joined the CPC in March 1974. As Premier Wen Jiabao's top lieutenant, Mr. Li's official portfolio included responsibility for development, price controls, finance, climate change, and macroeconomic management.

Mr. Xi made his first major appearance internationally at the 2010 World Economic Forum in Davos, Switzerland. At the Forum, Mr. Xi briefed the audience on China's commitment to sustainable development, green energy, a decrease in the income gap, the modernization of key strategic industries, and peaceful development.

The son of a low-level official from the poor, rural province of Anhui, he was sent to work for four years as a farmer during the Cultural Revolution. During that time, China's universities admitted only those with a suitable proletarian class background, but in 1977, the competitive entrance exam was restored. A total of 11.6 million people applied. Li was one of 401,000 admitted, making him a member of the famous "Class of 1982."

Mr. Li earned an LLB and PhD in economics from Peking University (colloquially known as Beida University). Mr. Li is married to Cheng Hong, a professor at the Capital University of Economics and Business in Beijing, and his father-in-law is a former vice secretary of the Communist Youth League Central Committee.

Five-Year Plans of the People's Republic of China

The Five-Year Plans of the People's Republic of China (PRC), displayed in Table 4, represent a series of economic development initiatives. The Chinese economy

has been influenced by the CPC through the plenary session of the Central Committee and national congresses. The party plays a leading role in establishing the foundations and principles of Chinese communism, mapping strategies for economic development, setting growth targets, and launching reforms.

Planning is a key characteristic of centralized economies, and one plan established for the entire country normally includes detailed economic development guidelines for all its regions. In order to more accurately reflect China's transition from a Soviet-style planned economy to a socialist market economy, the name of the 11th five-year program was changed to "guideline" from "plan."

Table 4 Five-Year Plans and Guidelines of the PRC

Plan or Guideline	Years Covered	Theme	Key Features
First	1953–1957	Stalinist Central Plan	Industrialization and agricultural producers' cooperatives
Second	1958–1962	Great Leap Forward	Capital construction and heavy Industry expansion
Third	1966–1970	Agricultural Push	Agricultural development and basic needs
Fourth	1971–1975	Cultural Revolution	Infrastructure construction and agriculture
Fifth	1976–1980	Post-Mao (Reforms and Opening Up)	Infrastructure construction, and expansion of the steel, petroleum, and agriculture industries
Sixth	1981–1985	Readjustment and Recovery	National defense industry, energy conservation and environmental protection, foreign trade and investment, technological innovation, and cultural life improvement
Seventh	1986–1990	Socialism with Chinese Characteristics	Economic reform, openness to the outside world, construction of a socialist ideological civilization, development of science and education, and development of the energy, communications, telecommunications, and raw materials industries
Eighth	1991–1995	Technical Development	Expansion of economic development zones, foreign reserves growth, imports and exports growth, and the construction and development of transportation infrastructure, including ports, airports, railways, and highways
Ninth	1996–2000	Reform of State-Owned Enterprises	Socialist market economy, modernization, population control, and reduction of poverty
Tenth	2001–2005	Strategic Restructuring	National economy, social IT, infrastructure, population control, forest area coverage, high school and higher education enrollment, and medical and health services
Eleventh	2006–2010	Rebalancing Alert	Development of the services industry, research and development, urbanization, energy conservation, water conservation, pollution control, pensions, and a rural cooperative medical care system
Twelfth	2011–2015	Pro-Consumption	Higher wages, a social safety net, domestic consumption, large-scale transactions-intensive industries including wholesale and retail trade, domestic transport and supply-chain logistics, health care, and leisure and hospitality

Sources: www.china.org.cn; Morgan Stanley Wealth Management Investment Strategy; Morgan Stanley & Co. Incorporated Research, "China's 12th Five-Year Plan," March 21, 2011.

In October 2010, China held its Fifth Plenum of the 17th CPC Central Committee. The Committee discussed China's 12th Five-Year Plan, which was officially released in two annual meetings in March 2011.[19]

The March 2011 draft focused on social and economic development, emphasizing the transformation of China into a consumer-driven, capital-intensive economy. Under the March 2011 draft of the 12th Five-Year Plan, China intended to provide 4 trillion yuan (US$600 billion) to emerging industries, including energy and environmental protection, information technology (IT), biotechnology, advanced manufacturing, alternative energy, new materials, and new-energy automobiles. China projected that the added value of these industries would reach 8 percent of GDP by 2015 and 15 percent by 2020.

China remained focused on closing the income disparity between rich and poor, between urban and rural populations, and between coastal and interior regions and provinces.

Other priorities in the 12th Five-Year Plan included preparing for an aging population, improving medical services, stabilizing property prices, maintaining prosperity and stability in Hong Kong, modernizing rural areas, improving labor rights, boosting domestic demand, reforming the financial system, and opening up further to the outside world.

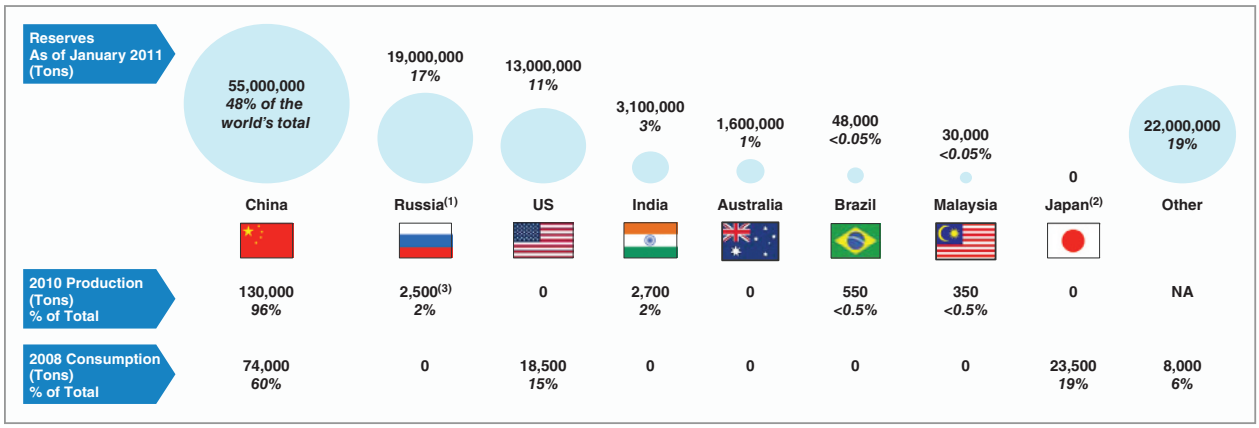
China and Rare Earth Elements[20]

As defined by the International Union of Pure Applied Chemistry (IUPAC), rare earth elements or rare earth metals represent a collection of 17 chemical elements in the periodic table. Because of their geochemical properties, rare earth elements are not often found in concentrated and economically exploitable forms. Until 1948, most of the world's rare earths were sourced from placer sand deposits in India and Brazil. Through the 1950s, South Africa emerged as the world's primary rare earth source. Through the 1960s until the 1980s, the Mountain Pass rare earth mine in California was the leading producer. Beginning in 2011, concerns arose over a potential shortage of rare earths. Over the 2010–2020 time period, worldwide demand for rare earth elements was expected to exceed supply by 40,000 tonnes annually unless major new sources were developed.

As of January 2012, China produced over 95 percent of the world's rare earth supply, mostly in Inner Mongolia, with only 48 percent of the world's

[19] "China Underlines Emerging Industries in 12th Five-Year Plan," *International Business Times,* October 18, 2010; China Economic Net, http://en.ce.cn/.

[20] IUPAC; www.iupac.org; "After China's Rare Earth Embargo," *New York Times*, October 29, 2010; "Many Want Rare Earths, but Few Are Mining Them," *New York Times*, February 6, 2011; United States Geological Survey, www.usgs.gov; U.S. Department of Energy, Molycorp Minerals; Riedel Research.



Notes:
1. Data are for the Commonwealth of Independent States, which include: Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Moldova, Russia, Tajikistan, Turkmenistan, Uzbekistan, and Ukraine.
2. The Japan category shown here includes Southeast Asia.
3. This total reflects 2009 Data.

Figure 7 China and Rare Earth Elements

Sources: IUPAC; www.iupac.org; the "After China's Rare Earth Embargo," *New York Times*, October 29, 2010; "Many Want Rare Earths, but Few Are Mining Them," *New York Times*, February 6, 2011; United States Geological Survey, www.usgs.gov; US Department of Energy, Molycorp Minerals; Riedel Research.

proven reserves, as shown in Figure 7. Rare earth metals are essential components of smartphones, electric cars, many computer parts, clean energy applications, and a range of military hardware. Uncertainty over supply disruptions, rule changes, export quotas, export taxes, and in some cases, targeted embargoes has raised concerns for countries and companies facing supply shortages and rising prices, and led to research and development into substitutes and plans to expand rare earths production outside China. China has also exerted important influence over the global supply of other elements, including antimony, bismuth, germanium, indium, magnesium, silicon, tin tungsten, and vanadium.

The 17 Rare Earth Elements

The 17 rare earth elements listed in Table 5 include the lanthanoids (elements 57 to 71), plus scandium and yttrium. Some versions of the periodic table often label the lanthanoids and actinoids (elements 90 to 103) as "rare earth metals," not to be confused with the 17 rare earth elements, which, according to IUPAC, include only the lanthanoids, scandium, and yttrium.

China's Nuclear Energy Industry[21]

As of early 2013, almost half the nuclear reactors under construction in the world were in China. The Chinese utilize reactor designs from Russia, the United

[21] Morgan Stanley Wealth Management Investment Strategy; "China Wants Nuclear Reactors—Fast," *Bloomberg Businessweek*, December 2, 2010.

Table 5 The 17 Rare Earth Elements

Atomic Number	Symbol	Name	Selected Usages
21	Sc	Scandium	Light aluminium-scandium alloy for aerospace components, and additive in mercury-vapor lamps
39	Y	Yttrium	Yttrium-aluminum garnet (YAG) laser, and YBCO high-temperature superconductors
57	La	Lanthanum	High-refractive index glass, flint, hydrogen storage, battery electrodes, and camera lenses
58	Ce	Cerium	Chemical oxidizing agents, polishing powder, and yellow colors in glass and ceramics
59	Pr	Praseodymium	Rare-earth magnets, lasers, core materials for carbon-arc lighting, and colorants in glasses and enamels
60	Nd	Neodymium	Rare-earth magnets, lasers, violet colors in glass and ceramics, and ceramic capacitors
61	Pm	Promethium	Nuclear batteries
62	Sm	Samarium	Rare-earth magnets, lasers, neutron capture, and masers
63	Eu	Europium	Red and blue phosphors, lasers, and mercury-vapor lamps
64	Gd	Gadolinium	Rare-earth magnets, high-refractive index glass or garnets, lasers, X-ray tubes, and computer memories
65	Tb	Terbium	Green phosphors, lasers, and fluorescent lamps
66	Dy	Dysprosium	Rare-earth magnets and lasers
67	Ho	Holmium	Lasers
68	Er	Erbium	Lasers and vanadium steel
69	Tm	Thulium	Portable X-ray machines
70	Yb	Ytterbium	Infrared lasers and chemical reducing agents
71	Lu	Lutetium	PET scan detectors and high-refractive index glass

Sources: IUPAC, www.iupac.org; "After China's Rare Earth Embargo," *New York Times*, October 29, 2010; United States Geological Survey, www.usgs.gov; www.periodictable.com.

States, France, and China itself. A key issue is whether foreign suppliers will be able to keep pace with Chinese demand for critical and scarce components.

Prior to Japan's Sendai Earthquake of March 11, 2011 (measuring 9.0 on the Richter Scale), the Chinese were prepared to spend US$511 billion to build up to 245 reactors, according to Arthur D. Little, a management consulting firm.

The Chinese have been rapidly developing self-sufficiency in reactor design and construction. They plan to use several suppliers, with the goal of becoming a developer themselves.

As of December 2010, China operated 12 nuclear plants, having built one to two reactors per decade; by late 2012, 27 facilities were under

Table 6 Top 10 Producers of Nuclear Energy by 2020

Estimates are as of March 2011

		2010			2020E		
	Country	**Reactor Units**	**Net Capacity (MWe)**	**% of World**	**Reactor Units**	**Net Capacity (MWe)**	**% of World**
1	China	12	9,706	3%	96	112,270	20%
2	United States	104	100,367	27%	111	109,183	19%
3	France	58	63,130	17%	60	66,370	12%
4	Japan	54	46,824	12%	59	53,589	9%
5	Russia	31	21,743	6%	43	32,289	6%
6	South Korea	21	18,460	5%	30	29,380	5%
7	Germany	17	20,379	5%	17	20,379	4%
8	India	20	4,388	1%	36	18,092	3%
9	Canada	18	12,652	3%	21	15,237	3%
10	Ukraine	15	13,230	4%	17	15,130	3%
	Global Total	**442**	**374,806**		**606**	**568,973**	

Source: Ux Consulting Company; Morgan Stanley & Co. Inc. Research, "Global CleanTech: Tohoku Quake: Implications for Clean Technology," March 22, 2011.

construction. As of early 2011, China's energy planners aimed to have 96 reactors by 2020 (see Table 6), and by 2030, enough additional reactors to generate more power than all 104 reactors in the United States, the 2010 leader in nuclear reactor units.

The Chinese have also planned for non–fossil fuels to produce 15 percent of China's energy by 2020; although the Chinese have invested significant amounts on wind turbines and solar panels, nuclear power needs to be built up to reach that target.

China Investment Corporation[22]

China Investment Corporation (CIC) is an investment institution established as a wholly state-owned company under the Company Law of the People's Republic of China. The CIC is headquartered in Beijing and was established on September 29, 2007, with the issuance of special bonds worth Rmb 1.55 trillion by the Ministry of Finance. The issued bonds were used to acquire approximately US$200 billion of China's foreign exchange reserves, forming the foundation of its registered capital.

CIC's overseas investment portfolio is mainly composed of equity, fixed income, and alternative investments, in developed and emerging markets.

[22] China Investment Corp, www.china-inv.cn; Sovereign Wealth Fund Institute, www.swfinstitute.org.

Its alternative investments include hedge funds, private equity, commodities, and real estate, among other asset classes.

CIC is one of four Chinese sovereign wealth funds, the others being the State Administration of Foreign Exchange (SAFE) Investment Company, the National Council for the Social Security Fund, and the China-Africa Development Fund. As of March 2011, CIC had US$332 billion in assets under management, making it the fifth-largest sovereign wealth fund in the world.

SAFE, which is primarily responsible for managing China's foreign exchange reserves, had an estimated US$568 billion in assets as of March 2013, making it the third-largest sovereign wealth fund in the world. As of March 2013, the National Social Security Fund and the China-Africa Development Fund had an estimated US$161 billion and US$5 billion in assets under management, respectively. Aggregated together, China's four sovereign wealth funds were worth an estimated US$1,216 billion as of March 2013.

For information on CIC's U.S. securities holdings, please go to www.sec.gov.

CIC's Four Investing Principles

1. Select investments based on economic and financial objectives and an assessment of the commercial return.
2. Allocate capital and assets within the given risk tolerance of the owner to maximize shareholder value.
3. Seek an inactive, passivist role in investing in companies.
4. Seek long-term, stable, sustainable, and risk-adjusted return.

CIC's Executive Team

- Lou Jiwei, chairman and CEO
- Gao Xiqing, president and CIO
- Jin Liqun, chairman of Board of Supervisors

China's Foreign Exchange Reserves

As of April 2013, China had US$3.4 trillion in foreign exchange reserves, ranking number one with over 30 percent of the world's total.

- From 1995 through 2010, China's foreign exchange reserves grew at a compound annual growth rate (CAGR) of 28 percent (see Figure 8).
- The foreign exchange reserves of China, Hong Kong, and Taiwan have more than quadrupled from 2003 through 2009 (see Figure 9).

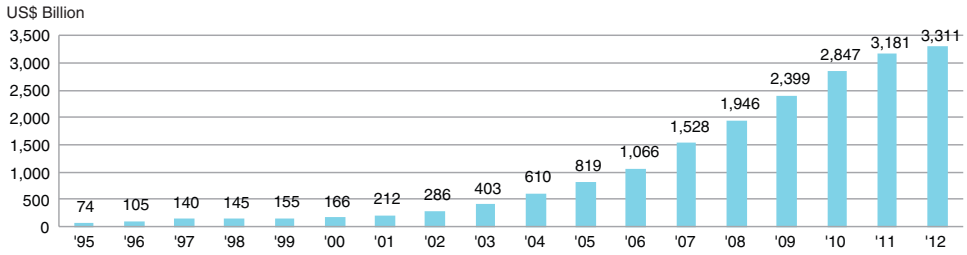


Figure 8 China's Foreign Exchange Reserves

Source: Bloomberg, LLC. Data are as of December 31, 2012.

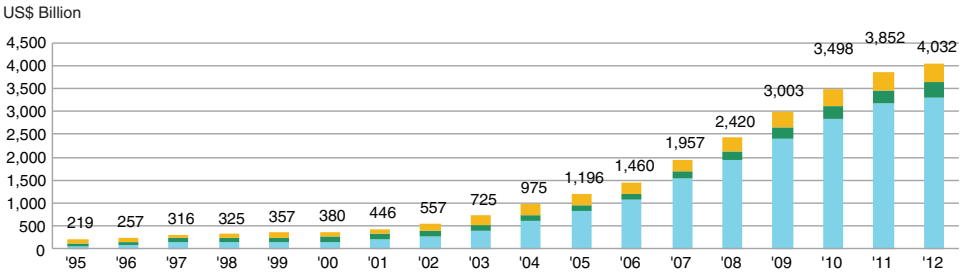


Figure 9 Combined Foreign Exchange Reserves of China, Hong Kong, and Taiwan

Source: Bloomberg, LLC. Data are as of December 31, 2012.

Foreign Direct Investment Flows

Annual Foreign Direct Investment in China has more than doubled over the 1999–2009 time frame (see Figure 10).

In the post-millennium era, investment flows into China have exceeded the combined flows into six other Asian emerging market economies (see Figure 11).

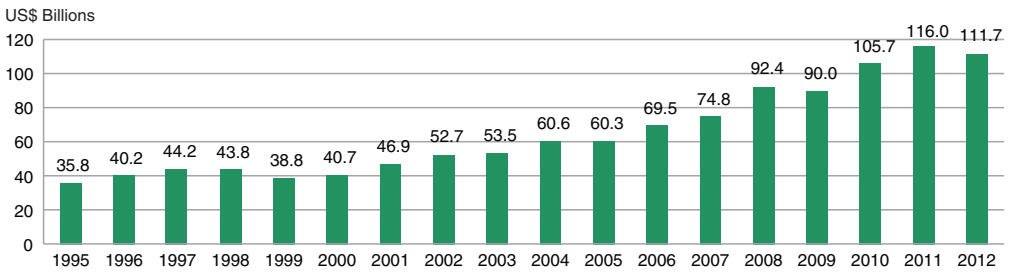


Figure 10 Annual Foreign Direct Investment Flows into China, 1995–2012

Sources: People's Republic of China Ministry of Commerce; People's Republic of China National Bureau of Statistics; *China Statistical Yearbook 2009*. Data are as of December 31, 2012.

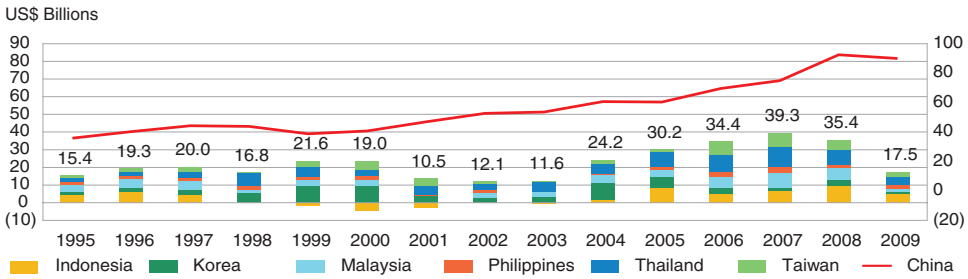


Figure 11 Foreign Direct Investment in China Compared with Six Other Asian Nations

Sources: Morgan Stanley & Co. Inc. Research; People's Republic of China Ministry of Commerce; People's Republic of China National Bureau of Statistics; *China Statistical Yearbook 2009*. Data are as of December 31, 2009.

U.S. direct investment in China has been significant in the 1990s and 2000s decades (see Figure 12).

China's Trade Activity with the United States

In 2010, China was the United States' top trading partner, in part due to its fixed-currency rate pegged to the U.S. dollar for the first half of the year (see Table 7).

From 2001 to 2010, China's total trade activity grew at a CAGR of 15.9 percent.

From 2001 through 2010, China's total bilateral trade with the U.S. grew from $121.5 billion to 456.8 billion. In 2010, America's top exports to China were electrical machinery and power generation equipment (see Table 8) and America's top imports from China were in the same categories (see Table 9).

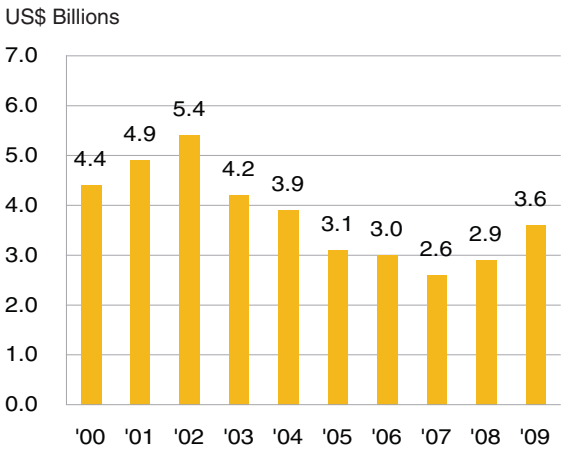


Figure 12 U.S. Direct Investment in China

Source: People's Republic of China Ministry of Commerce. Data are as of December 31, 2009.

Table 7 China's Trade with the United States, 2001–2011

(US $ Billion) or percentage change as indicated

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
US exports	19.2	22.1	28.4	34.7	41.8	55.2	65.2	71.5	69.6	91.9	103.9
% change YoY	18.3%	14.7%	28.9%	22.2%	20.5%	32.0%	18.1%	9.5%	(2.7%)	32.1%	13.1%
US imports	102.3	125.2	152.4	196.7	243.5	287.8	321.5	337.8	296.4	364.9	399.3
% change YoY	2.2%	22.4%	21.7%	29.1%	23.8%	18.2%	11.7%	51.0%	(12.3%)	23.1%	94.0%
Total Bilateral Trade	**121.5**	**147.3**	**180.8**	**231.4**	**285.3**	**343.0**	**386.7**	**409.3**	**366.0**	**456.8**	**503.2**
US balance	**(83.0)**	**(103.1)**	**(124.0)**	**(162.0)**	**(201.6)**	**(232.5)**	**(256.3)**	**(266.3)**	**(226.8)**	**(273.1)**	**(295.5)**

Sources: U.S. Department of Commerce; U.S. International Trade Commission. Data are as of December 31, 2011.

Table 8 Top U.S. Exports to China

2010 (US$ Billion)

Description	2009	2010	2011
Electrical Machinery	9.4	11.5	7.2
Power Generation Equipment	8.4	11.2	10.8
Oil Seeds and Oleaginous Fruits	9.3	11.0	10.7
Air and Spacecraft	5.4	5.8	6.3
Optics and Medical Equipment	4.0	5.2	5.2
Plastics	4.3	4.8	5.0
Inorganic and Organic Chemicals	3.4	4.5	3.5
Vehicles (Excluding Railway)	1.9	4.5	6.4
Pulp and Paperboard	2.5	3.0	3.8
Copper	1.8	2.9	3.7

Sources: U.S. International Trade Commission; The U.S.-China Business Council. Data are as of December 31, 2011.

Table 9 Top U.S. Imports from China

2010 (US$ Billion)

Description	2009	2010	2011
Electrical Machinery	72.9	90.8	98.7
Power Generation Equipment	62.4	82.7	94.9
Apparel	24.4	28.8	30.1
Toys and Games	23.2	25.0	22.6
Furniture	16.1	20.0	20.5
Footwear	13.3	15.9	16.7
Plastics	8.0	9.6	10.9
Iron and Steel	8.0	8.4	8.6
Leather and Travel Goods	6.0	7.5	-
Optics and Medical Equipment	5.6	7.0	-

Sources: U.S. International Trade Commission; The U.S.-China Business Council. Data are as of December 31, 2011.

China's Trade Activity with the World

China's global trade has increased dramatically in recent years, as shown in Table 10. From 2001 to 2010, China's total trade activity grew at a compound annual growth rate of 26.2 percent.

Table 10 China's Trade with the World

(US $ Billion) or percentage Change as indicated

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Exports	266.1	325.6	438.2	593.3	762.0	968.9	1,217.8	1,430.7	1,201.7	1,577.9	1,898.6
%Change YoY	6.8%	22.4%	34.6%	35.4%	28.4%	27.2%	25.7%	17.5%	(16.0%)	31.3%	20.3%
Imports	243.6	295.2	412.8	561.2	660.0	791.5	956.0	1,132.6	1,005.9	1,394.8	1,743.5
%Change YoY	8.2%	21.2%	39.8%	36.0%	17.6%	19.9%	20.8%	18.5%	(11.2%)	38.7%	25.0%
Total Trade	509.7	620.8	851.0	1,154.6	1,422.0	1,760.4	2,173.8	2,563.3	2,207.6	2,972.7	3,642.1
Balance	22.6	30.4	25.5	32.1	102.0	177.4	261.8	298.1	195.8	183.1	155.1

Sources: People's Republic of China National Bureau of Statistics; Morgan Stanley & Co. Inc. Research. Data are as of December 31, 2010.

Table 11 Tariff Rates in China

Weighted Avg. of All Products

Year	Tariff (%)
1992	32.2
1993	30.3
1994	27.9
1995	NA
1996	19.8
1997	15.8
1998	15.6
1999	14.5
2000	14.6
2001	14.1
2002	NA
2003	6.5
2004	6.0
2005	4.8
2006	4.3
2007	5.1
2010	4.0
2011	4.1

Source: World Bank. Data are as of December 31, 2011.

With imports up an estimated 39 percent in 2010, China became an important source of growth for its neighbors in Asia and elsewhere.

- Table 11 shows China's weighted average tariff rates for all products.
- Table 12 shows China's leading import and export products.
- Table 13 shows China's leading import-supplying countries and export destination countries.

Table 12 China's Leading Import and Export Products

2010 (US$ Billion) Description	2009	2010	% Change
Leading Imports			
Electrical Machinery	244	314	29.0%
Minerals, Fuels, and Oil	124	189	52.1%
Power Generation Equipment	124	172	39.4%
Ores, Slag, and Ash	70	109	54.9%
Optics and Medical Equipment	67	90	34.1%
Leading Exports			
Electrical Machinery	301	389	29.1%
Power Generation Equipment	236	310	31.4%
Apparel	100	121	20.5%
Iron and Steel	47	68	44.1%
Furniture	39	52	34.0%

Source: People's Republic of China General Administration of Customs, "China's Customs Statistics." Data are as of December 31, 2010.

Table 13 China's Leading Import Suppliers and Export Destinations

2010 (US$ Billion) Economy	2009	2010	% Change
Leading Import Suppliers			
Japan	131	177	35.0%
South Korea	103	138	35.0%
Taiwan	86	116	35.0%
United States	70	92	32.0%
Germany	56	74	33.4%
Leading Export Destinations			
United States	296	365	23.1%
Hong Kong	166	218	31.3%
Japan	98	121	23.7%
South Korea	54	69	28.1%
Germany	50	68	36.3%

Source: People's Republic of China General Administration of Customs, "China's Customs Statistics." Data are as of December 31, 2010.