

Chapter X

10. Health, Education, Economic Indicators

10.1 Health care in China

Since the founding of the People's Republic, the goal of health programs has been to provide care to every member of the population and to make maximum use of limited health-care personnel, equipment, and financial resources. The emphasis has been on preventive rather than curative medicine on the premise that preventive medicine is "active" while curative medicine is "passive." The health-care system has dramatically improved the health of the people, as reflected by the remarkable increase in average life expectancy from about thirty-two years in 1950 to sixty-nine years in 1985.¹⁹³⁵

After 1949 the Ministry of Public Health was responsible for all health-care activities and established and supervised all facets of health policy. Along with a system of national, provincial-level, and local facilities, the ministry regulated a network of industrial and state enterprise hospitals and other facilities covering the health needs of workers of those enterprises. In 1981 this additional network provided approximately 25 percent of the country's total health services. Health care was provided in both rural and urban areas through a three-tiered system. In rural areas the first tier was made up of barefoot doctors working out of village medical centres. They provided preventive and primary-care services, with an average of two doctors per 1,000 people. At the next level were the township health centres, which functioned primarily as out-patient clinics for about 10,000 to 30,000 people each. These centres had about ten to thirty beds each, and the most qualified members of the staff were assistant doctors. The two lower-level tiers made up the "rural collective health system" that provided most of the country's medical care. Only the most seriously ill patients were referred to the third and final tier, the county hospitals, which served 200,000 to 600,000 people each and were staffed by senior doctors who held degrees from 5-year medical schools. Health care in urban areas was provided by paramedical personnel assigned to factories and neighbourhood health stations. If more professional care was necessary the patient was sent to a district hospital, and the most serious cases were handled by municipal hospitals. To ensure a higher level of care, a number of state enterprises and government agencies sent their employees directly to district or municipal hospitals, circumventing the paramedical, or barefoot doctor, stage.¹⁹³⁶

An emphasis on public health and preventive treatment characterized health policy from the beginning of the 1950s. At that time the party began to mobilize the population to engage in mass "patriotic health campaigns" aimed at improving the low level of environmental sanitation and hygiene and attacking certain diseases. One of the best examples of this approach was the mass assaults on the "four pests"--rats, sparrows, flies, and mosquitoes--and on Schistosoma-carrying snails. Particular efforts were devoted in the health campaigns to improving water quality through such measures as deep-well construction and human-waste treatment. Only in the larger cities had human waste been

¹⁹³⁵ <http://countrystudies.us/china/38.htm>

¹⁹³⁶ Idib

centrally disposed. In the countryside, where "night soil" has always been collected and applied to the fields as fertilizer, it was a major source of disease. Since the 1950s, rudimentary treatments such as storage in pits, composting, and mixture with chemicals have been implemented.¹⁹³⁷

As a result of preventive efforts, such epidemic diseases as cholera, plague, typhoid, and scarlet fever have almost been eradicated. The mass mobilization approach proved particularly successful in the fight against syphilis, which was reportedly eliminated by the 1960s. The incidence of other infectious and parasitic diseases was reduced and controlled. Relaxation of certain sanitation and anti-epidemic programs since the 1960s, however, may have resulted in some increased incidence of disease. In the early 1980s, continuing deficiencies in human-waste treatment were indicated by the persistence of such diseases as hookworm and schistosomiasis. Tuberculosis, a major health hazard in 1949, remained a problem to some extent in the 1980s, as did hepatitis, malaria, and dysentery. In the late 1980s, the need for health education and improved sanitation was still apparent, but it was more difficult to carry out the health-care campaigns because of the breakdown of the brigade system. By the mid-1980s, China recognized the acquired immune deficiency syndrome (AIDS) virus as a serious health threat but remained relatively unaffected by the deadly disease. As of mid-1987 there was confirmation of only two deaths of Chinese citizens from AIDS, and monitoring of foreigners had begun. Following a 1987 regional World Health Organization meeting, the Chinese government announced it would join the global fight against AIDS, which would involve quarantine inspection of people entering China from abroad, medical supervision of people vulnerable to AIDS, and establishment of AIDS laboratories in coastal cities. Additionally, it was announced that China was experimenting with the use of traditional medicine to treat AIDS.¹⁹³⁸

In the mid-1980s the leading causes of death in China were similar to those in the industrialized world: cancer, cerebrovascular disease, and heart disease. Some of the more prevalent forms of fatal cancers included cancer of the stomach, oesophagus, liver, lung, and colon-rectum. The frequency of these diseases was greater for men than for women, and lung cancer mortality was much greater in higher income areas. The degree of risk for the different kinds of cancers varied widely by region. For example, nasopharyngeal cancer was found primarily in south China, while the incidence of oesophageal cancer was higher in the north.¹⁹³⁹

To address concerns over health, the Chinese greatly increased the number and quality of health-care personnel, although in 1986 serious shortages still existed. In 1949 only 33,000 nurses and 363,000 physicians were practicing; by 1985 the numbers had risen dramatically to 637,000 nurses and 1.4 million physicians. Some 436,000 physicians' assistants were trained in Western medicine and had 2 years of medical education after junior high school. Official Chinese statistics also reported that the number of paramedics increased from about 485,400 in 1975 to more than 853,400 in 1982. The number of

¹⁹³⁷ <http://countrystudies.us/china/38.htm>

¹⁹³⁸ Ibid

¹⁹³⁹ Ibid

students in medical and pharmaceutical colleges in China rose from about 100,000 in 1975 to approximately 160,000 in 1982.¹⁹⁴⁰

Efforts were made to improve and expand medical facilities. The number of hospital beds increased from 1.7 million in 1976 to 2.2 million in 1984, or to 2 beds per 1,000 compared with 4.5 beds per 1,000 in 1981 in the United States. The number of hospitals increased from 63,000 in 1976 to 67,000 in 1984, and the number of specialized hospitals and scientific research institutions doubled during the same period. The availability and quality of health care varied widely from city to countryside. According to 1982 census data, in rural areas the crude death rate was 1.6 per 1,000 higher than in urban areas, and life expectancy was about 4 years lower. The number of senior physicians per 1,000 population was about 10 times greater in urban areas than in rural ones; state expenditure on medical care was more than -Y26 per capita in urban areas and less than -Y3 per capita in rural areas. There were also about twice as many hospital beds in urban areas as in rural areas. These are aggregate figures, however, and certain rural areas had much better medical care and nutritional levels than others. In 1987 economic reforms were causing a fundamental transformation of the rural health-care system. The de-collectivization of agriculture resulted in a decreased desire on the part of the rural populations to support the collective welfare system, of which health care was a part. In 1984 surveys showed that only 40 to 45 percent of the rural population was covered by an organized cooperative medical system, as compared with 80 to 90 percent in 1979.¹⁹⁴¹

This shift entailed a number of important consequences for rural health care. The lack of financial resources for the cooperatives resulted in a decrease in the number of barefoot doctors, which meant that health education and primary and home care suffered and that in some villages sanitation and water supplies were checked less frequently. Also, the failure of the cooperative health-care system limited the funds available for continuing education for barefoot doctors, thereby hindering their ability to provide adequate preventive and curative services. The costs of medical treatment increased, deterring some patients from obtaining necessary medical attention. If the patients could not pay for services received, then the financial responsibility fell on the hospitals and commune health centres, in some cases creating large debts.¹⁹⁴²

Consequently, in the post-Mao era of modernization, the rural areas were forced to adapt to a changing health-care environment. Many barefoot doctors went into private practice, operating on a fee-for-service basis and charging for medication. But soon farmers demanded better medical services as their incomes increased, bypassing the barefoot doctors and going straight to the commune health centres or county hospitals. A number of barefoot doctors left the medical profession after discovering that they could earn a better living from farming, and their services were not replaced. The leaders of brigades, through which local health care was administered, also found farming to be more lucrative than their salaried positions, and many of them left their jobs. Many of the cooperative medical programs collapsed. Farmers in some brigades established voluntary health-insurance programs but had difficulty organizing and administering

¹⁹⁴⁰ <http://countrystudies.us/china/38.htm>

¹⁹⁴¹ Idib.

¹⁹⁴² Idib.

them. Although the practice of traditional Chinese medicine was strongly promoted by the Chinese leadership and remained a major component of health care, Western medicine was gaining increasing acceptance in the 1970s and 1980s. For example, the number of physicians and pharmacists trained in Western medicine reportedly increased by 225,000 from 1976 to 1981, and the number of physicians' assistants trained in Western medicine increased by about 50,000. In 1981 there were reportedly 516,000 senior physicians trained in Western medicine and 290,000 senior physicians trained in traditional Chinese medicine. The goal of China's medical professionals is to synthesize the best elements of traditional and Western approaches.

In practice, however, this combination has not always worked smoothly. In many respects, physicians trained in traditional medicine and those trained in Western medicine constitute separate groups with different interests. For instance, physicians trained in Western medicine have been somewhat reluctant to accept "unscientific" traditional practices, and traditional practitioners have sought to preserve authority in their own sphere. Although Chinese medical schools that provided training in Western medicine also provided some instruction in traditional medicine, relatively few physicians were regarded as competent in both areas in the mid- 1980s. The extent to which traditional and Western treatment methods were combined and integrated in the major hospitals varied greatly. Some hospitals and medical schools of purely traditional medicine were established. In most urban hospitals, the pattern seemed to be to establish separate departments for traditional and Western treatment. In the county hospitals, however, traditional medicine received greater emphasis. Traditional medicine depends on herbal treatments, acupuncture, acupressure, moxibustion (the burning of herbs over acupuncture points), and "cupping" of skin with heated bamboo. Such approaches are believed to be most effective in treating minor and chronic diseases, in part because of milder side effects. Traditional treatments may be used for more serious conditions as well, particularly for such acute abdominal conditions as appendicitis, pancreatitis, and gallstones; sometimes traditional treatments are used in combination with Western treatments. A traditional method of orthopaedic treatment, involving less immobilization than Western methods, continued to be widely used in the 1980s. Although health care in China developed in very positive ways by the mid-1980s, it exacerbated the problem of overpopulation. In 1987 China was faced with a population four times that of the United States and over three times that of the Soviet Union. Efforts to distribute the population over a larger portion of the country had failed: only the minority nationalities seemed able to thrive in the mountainous or desert-covered frontiers. Birth control programs implemented in the 1970s succeeded in reducing the birth rate, but estimates in the mid-1980s projected that China's population will surpass the 1.2 billion mark by the turn of the century, putting still greater pressure on the land and resources of the nation.¹⁹⁴³

In a white paper title "Medical and Health Services in China" published by the State Council's Information Department reports that over the years, China has worked hard to develop its medical and health services with Chinese characteristics in accordance with the policy of "making rural areas the focus of our work, putting disease prevention first, supporting both traditional Chinese medicine and Western medicine, relying on science,

¹⁹⁴³ <http://countrystudies.us/china/38.htm>

technology and education, and mobilizing the whole of society to join the efforts, improving the people's health and serving socialist modernization." Thanks to unremitting efforts that have been made, medical and healthcare systems covering both urban and rural residents have taken shape, the capabilities of disease prevention and control have been enhanced, the coverage of medical insurance has expanded, continuous progress has been made in medical science and technology, and the people's health has been remarkably improved. Medical and healthcare systems covering both urban and rural residents have been put in place. Of these systems, the first is the public health service system, which covers disease prevention and control, health education, maternity and child care, mental health, health emergency response, blood collection and supply, health supervision, family planning and some other specialized public health services, and a medical and healthcare system based on community-level healthcare networks that provides public health services. The second is the medical care system. In the rural areas, it refers to a three-level medical service network that comprises the county hospital, the township hospitals and village clinics, with the county hospital performing the leading role, and township hospitals and village clinics service at the base. And in the cities and towns, it refers to a new type of urban medical health service system that features division of responsibilities as well as cooperation among various types of hospitals at all levels and community healthcare centres. The third is the medical security system. This system comprises mainly the basic medical security, supported by many forms of supplementary medical insurance and commercial health insurance. The basic medical security system covers basic medical insurance for working urban residents, basic medical insurance for non-working urban residents, a new type of rural cooperative medical care and urban-rural medical aid, which cover, respectively, the employed urban population, unemployed urban population, rural population and people suffering from economic difficulties. And the fourth is the pharmaceutical supply system, which covers the production, circulation, price control, procurement, dispatching and use of pharmaceuticals. The recent work is focused on establishing a national system for basic drugs.

Reform of Medical and Healthcare Systems. The basic medical care systems cover both urban and rural residents. By 2011, more than 1.3 billion people had joined the three basic medical insurance schemes that cover both urban and rural residents, i.e., the basic medical insurance for working urban residents, the basic medical insurance for non-working urban residents, and the new type of rural cooperative medical care, with their total coverage being extended from 87% in 2008 to 95% in 2011. A basic system of drugs has been developed from scratch. A system for the selection, production, supply and use of basic drugs, and cover of them in medical insurance has been put into place. In 2011, the coverage of this system was extended to all grass-roots medical and health-care institutions run by the government, where these drugs were sold at zero profit, practically eliminating the practice of hospitals subsidizing their medical services with drug sales. A national guideline for the clinical application of basic drugs and a formulary have been drawn up to ensure that basic drugs are used according to due procedures at grass-roots medical institutions. A new mechanism has been established for the procurement of basic drugs, under which the basic drugs are to be purchased by provinces. As a result, the prices of basic drugs at grass-roots medical and healthcare institutions have dropped by 30% on average, as compared with those before the reform. The basic drugs have all been included in the list of reimbursable drugs covered by basic medical insurance. Also, efforts have been made to supply basic drugs in an orderly way

to village clinics and non-governmental medical institutions at the grass-roots level. The steps of reform have been quickened in drug production and circulation, and the supply of drugs has been better ensured. Urban and rural grass-roots level medical and health services have been further improved.

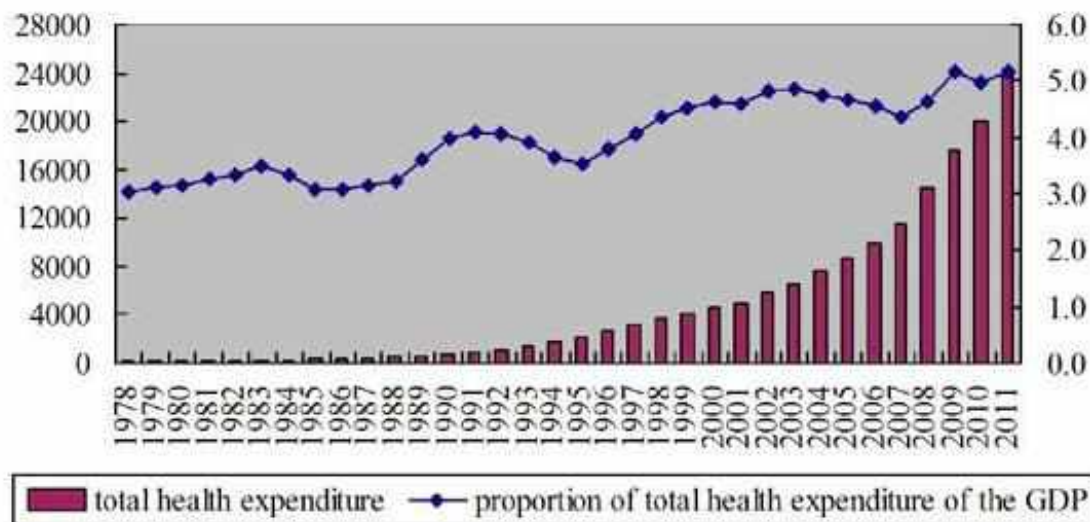
Infectious Disease Prevention and Treatment, and Health Emergency Management.

Since the founding of New China, the Chinese government has persisted in the principle of "prevention first and integrating prevention with treatment" and continuously intensified efforts in the prevention and treatment of infectious diseases. By preventive inoculation, patriotic health campaigns and other prevention and control measures, China has succeeded in bringing down the morbidity of infectious diseases and brought their spread under control. China has basically brought under control the epidemics of such diseases as plague, cholera, kala-azar and leprosy since the 1950s. In 2011, the morbidity of Class A and B infectious diseases was kept at a low level - 241.4 per 100,000 people. All these measures help to safeguard the Chinese people's health and life.¹⁹⁴⁴

10.1.1 Healthcare Financing Structure

The health financing structure has been constantly improved. China's health expenditure comes from the government's general tax revenue, social medical insurance, commercial health insurance, residents' out-of-pocket spending, etc. In 2011, the total health expenditure in China reached 2,434.591 billion yuan, 1,806.95 yuan per capita. The total expenditure accounted for 5.1% of the country's GDP.

China's total Healthcare Expenditure in proportion of its GDP.



Source: http://www.chinadaily.com.cn/m/chinahealth/2014-06/13/content_17585872_4.htm

¹⁹⁴⁴ http://www.chinadaily.com.cn/m/chinahealth/2014-06/13/content_17585872_8.htm

Note: To procure detailed information on laws and regulations regarding the healthcare sector in China, kindly access the following URL: <http://www.chinadaily.com.cn/m/chinahealth/regulations.html>

World Health Report (2010) titled “Health insurance systems in China: A briefing note” published by World Health Organisation maintains the following on the Health spending in China:

i) Total health expenditures rose from 3.02% of GDP in 1978 to 4.3%, or US\$ 142 per capita in 2008. Between 1978 and 1999, the central government's share of total health expenditure declined from approximately 32 to 15%. Individual out of pocket spending peaked in 2001, when nearly 60% of total health expenditures were from individual out-of-pocket payments. With the implementation of health reforms, there has been a steady increase in the share of government contribution to total health spending. In 2008, the government contributed about 24% of total spending for health, social health expenditure amounted to 29%, and private health insurance was 3.8%. Individual out-of-pocket payments contributed 42% of total health expenditures . Hospitals absorb some 71% of total health expenditures, a slight increase since 2000. The MoH reported that total health spending had increased to 4.96% of GDP by 2009, and that the government intended to increase health spending to 8% of GDP by 2020.

National Health Accounts, China

Selected indicators	1995	2000	2005	2008
Total expenditure on health (THE) as % of GDP	3.5	4.6	4.5	4.3
General government expenditure on health (GGHE) as % of THE	51.2	38.7	40.8	46.7
Social security funds as % of GGHE	64.2	57.2	54.1	55.3
Private expenditure on health (PvtHE) as % of THE	48.8	61.3	59.2	53.3
Private insurance as % of PvtHE	0.0	1.0	6.3	7.1
Private out-of-pocket payment as % of PvtHE	96.3	97.3	92.9	92.0
Total expenditure on hospitals as % of THE	68.8	68.9	70.5	-
Total expenditure on inpatient care as % of THE	34.1	34.6	-	-
Prevention and public health services as % of THE	7.7	8.8	-	-
Total expenditure on health / capita at exchange rate (US\$)	21	43	76	142

Source: National Health Accounts, as reported by the Chinese Health Economics Institute, Ministry of Health, to the WHO.

Available at: https://www.who.int/healthsystems/topics/financing/healthreport/37ChinaB_YFINAL.pdf

ii) Rates of increase. Between 1978 and 2001, contributions from both the Government and social health expenditure declined as a proportion of total health expenditures. However, in real terms between 1978 and 2003, government health spending was estimated to have increased on average (8.7% per annum), with higher rates of increase with the implementation of health insurance reforms. Overall, China's health spending has been growing at 16% annually, double GDP growth. Unnecessary care contributes to cost escalation.

iii) The share of household expenditures allocated to health care decreased from 8.7 to 8.2% nationally between 2003 and 2008 according to the NHSS. Based on household reports of medical expenses incurred, health expenditures continued to rise but at a slower pace than before 2003. Inflation adjusted expenditures grew at an annual rate of 3.3% for outpatient visits and 1.6% for inpatient services during 2003-2008.²⁸ In comparison, during 1998-2003, the annual rates of increase were 14 and 10% for outpatient and inpatient services respectively.

iv) Government health spending in rural areas is primarily from county level governments. In 2009, the central government announced health spending of 118.1 billion RMB (US\$17.4 billion), which amounted to 9% of total spending on health in 2008. Central contributions have increased rapidly over a relatively short period of time, reflecting the government's new policies to make higher public investments in the health sector. However, most public budgetary expenditures on health are made by county governments. This implies that the level of public spending and quality of care is based on the economic capacity of the local government. Provincial governments provide supply-side subsidies to hospitals, which are, for the most part, directed to municipal hospitals. Despite the national policy emphasis on strengthening primary care since 2003, the supply of hospitals increased rapidly, with a doubling between 2000 and 2008 in the number of specialist hospitals and an increase in the number of large general hospitals with over 800 beds by nearly 5-fold.¹⁹⁴⁵

In a report titled, “**2019 Medical Security Development Statistics Express**” published by National Healthcare Security Administration provides the following information on financial expenditure of PRC:¹⁹⁴⁶

In 2019, the national medical security system adheres to the guidance of Xi Jinping's socialist ideology with Chinese characteristics in the new era and fully implements the spirit of the 19th National Congress of the CPC and the Second, Third, and Fourth Plenary Sessions of the 19th CPC Central Committee and the spirit of the Central Economic Work Conference.

1. Basic Medical Insurance

i) Participants. As of the end of 2019, the number of people enrolled in full-caliber basic medical insurance was 135.436 million, and the coverage of insurance coverage was stable at more than 95%. Among them, the number of employees participating in basic medical insurance was 32.926 million, an increase of 12.45 million or 3.9% over the previous year; the number of participating urban and rural residents' basic medical insurance was 102.51 million, a decrease of 2.68 million or 0.3% over the previous year. Among the employees participating in basic medical insurance, there were 243.23 million in-service employees and 86.95 million retirees, an increase of 9.23 million and 3.22 million respectively over the end of the previous year.

ii) Fund income and expenditure. The total income and total expenditure of the basic medical insurance fund for the whole year were 23.334487 trillion yuan and 1994.573 billion yuan respectively, and the accumulated balance at the end of the year was 2691.211 billion yuan. The annual employee basic medical insurance fund income was 14,883.87 billion yuan, an increase of 9.94% year-on-year, of which overall fund income was 918.584 billion yuan; fund expenditure was 118.137 billion yuan, an increase of 10.37% year-on-year, of which overall fund expenditure was 711.203 billion yuan; the cumulative balance at the end of the year was 218.5029 billion yuan. Among them, the

¹⁹⁴⁵ https://www.who.int/healthsystems/topics/financing/healthreport/37ChinaB_YFINAL.pdf

¹⁹⁴⁶ http://www.nhsa.gov.cn/art/2020/3/30/art_7_2930.html

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accumulated balance of the unified fund is 1,357.379 billion yuan, and the accumulated balance of personal accounts is 827.650 billion yuan. The annual basic medical insurance fund income of urban and rural residents was 845.01 billion yuan, an increase of 7.71% year-on-year ; expenditure was 812.836 billion yuan, an increase of 14.23% year-on-year ; the accumulated balance at the end of the year was 506.182 billion yuan.

2. Maternity Insurance

i) Participants. The number of people participating in maternity insurance for the whole year was 21.432 million, an increase of 9.97 million over the end of the previous year, an increase of 4.9%.

ii) Fund situation. The annual maternity insurance fund income was 86.136 billion yuan, an increase of 10.28% year-on-year; expenditure was 79.207 billion yuan, an increase of 3.90% year-on-year; the accumulated balance at the end of the year was 61.929 billion yuan.

3. Medical assistance and poverty alleviation

Throughout the year, 77.82 million people were subsidized to participate in basic medical insurance, and 61.8 million people were directly rescued. In 2019, the central government invested 24.5 billion yuan in medical assistance subsidies, and arranged 4 billion yuan in subsidies to support deep poverty-stricken areas to improve the medical security of the poor. As of the end of 2019, the insurance participation rate of the poor people who filed cards in rural areas reached more than 99.9%. The comprehensive insurance policy of medical insurance and poverty alleviation benefited 200 million people in poverty, helping 4.18 million people suffering from illness to get rid of poverty precisely.

4. Medical Insurance Drug Catalog

In the 2019 edition of the National Medical Insurance Drugs Catalog, there are a total of 2,709 Western medicines and Chinese patent medicines, including 1,370 Western medicines and 1,339 Chinese patent medicines. In addition, 892 pieces of Chinese medicine decoction pieces with national standards were also included.

5. Drug procurement

As of the end of 2019, 31 provinces (autonomous regions and municipalities) across the country had initially counted 991.3 billion yuan in net purchase orders through the provincial drug centralized procurement platform. Among them, the order value of Western medicine (chemical drugs and biological products) was 811.5 billion yuan, and the order value of Chinese patent medicine was 179.8 billion yuan. The net purchase of medicines for Chinese medical insurance was 832.7 billion yuan, accounting for 84%. As of the end of 2019, the “4 + 7” pilot areas for centralized procurement of drugs 25 selected drugs have completed an average of 183% of the agreed purchase volume, and the purchase of selected drugs accounted for 78% of the purchase of generic drugs. After the nationwide expansion of the pilot program, all 25 generic varieties were successfully

expanded, and the price of the expansion was reduced by an average of 59%. On the basis of the "4 + 7" pilot program, the price was reduced by another 25%.

6. Medical insurance payment reform

The reform of payment methods was promoted. 97.5% of the overall planning districts across the country implemented total medical insurance payment control, and 86.3% of the overall planning districts implemented payment by disease type. Thirty cities were included in the national CHS-DRG paid pilot range. More than 60% of the coordinating districts have implemented bed-based payment for long-term and chronic in-patient medical services, and explored combining primary-level medical services with capitation and chronic disease management.

7. cross-province direct medical settlement

As of the end of 2019, the number of inter-provincial medical treatment direct settlement medical institutions was 27,608; the national platform had effective records of 5.39 million. The coverage of primary-level medical institutions continued to expand, with 24,720 designated medical institutions at the second level and below. Throughout the year, 2.72 million visits were made to hospitals across different provinces, medical expenses were 64.82 billion yuan, and the fund paid 38.32 billion yuan. Daily average settlement of 7452 people. The average hospitalization cost is 24,000 yuan, and the average fund is 14,000 yuan. Advance the trial of outpatient cost settlement. As of the end of 2019, all 41 cities in the Yangtze River Delta region have achieved full coverage of direct settlement of out-of-province outpatient medical expenses, and 5173 designated medical institutions have been networked, of which all medical institutions with outpatient clinics in Shanghai have been connected. The cumulative settlement of the Yangtze River Delta region was 646,000, involving a total medical cost of 14,262.2 million yuan. Five southwestern provinces (Yunnan, Guizhou, Sichuan, Chongqing, and Tibet) have initiated direct settlement of out-of-province outpatient medical expenses.

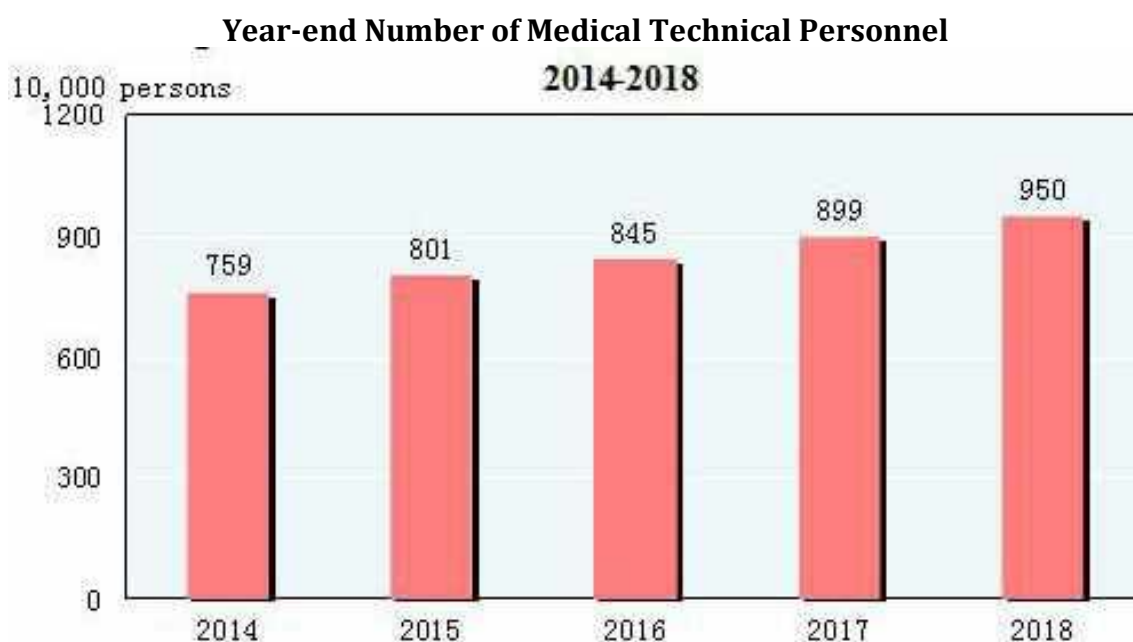
8. Medical Security Fund Supervision

Continue to implement special actions to combat fraud and defraud of medical security funds. The medical insurance departments at all levels inspected 815,000 designated medical institutions on site, and investigated and punished 264,000 medical institutions that violated laws and regulations. 357; a total of 33,100 insured persons in violation of laws and regulations were handled, 6,995 settlements were suspended, and 1,183 were handed over to the judiciary; a total of 11.556 billion yuan was recovered throughout the year. Throughout the year, the National Medical Insurance Bureau organized a total of 69 inspection teams to carry out nationwide flight inspections, covering 30 provinces and 149 medical institutions, with a total of 2.226 billion yuan in suspected violations.¹⁹⁴⁷

¹⁹⁴⁷ http://www.nhsa.gov.cn/art/2020/3/30/art_7_2930.html

10.1.2 Healthcare supplies

In “Statistical Communiqué of the People's Republic Of China on the 2018 National Economic And Social Development” issued by National Bureau of Statistics of China maintains that by the end of 2018, there were 1,004,000 medical and health institutions in China, including 32,000 hospitals. Of all the hospitals, 12,000 were public, and 20,000 were private. Of the 950,000 medical and health institutions at grass-root level, there were 36,000 township health centers, 35,000 community health service centers, 248,000 clinics and 630,000 village clinics. Of the 19,000 professional public health institutions, 3,469 were disease control and prevention centers and 3,141 were health monitoring institutions. By the end of 2018, there were 9.50 million medical technical personnel in China, including 3.58 million licensed doctors and licensed assistant doctors and 4.12 million registered nurses. The medical and health institutions in China possessed 8.45 million beds, of which, hospitals possessed 6.56 million and township health centers had 1.34 million. The total number of medical visits and hospital discharges in 2018 reached 8.42 billion and 260 million respectively.¹⁹⁴⁸



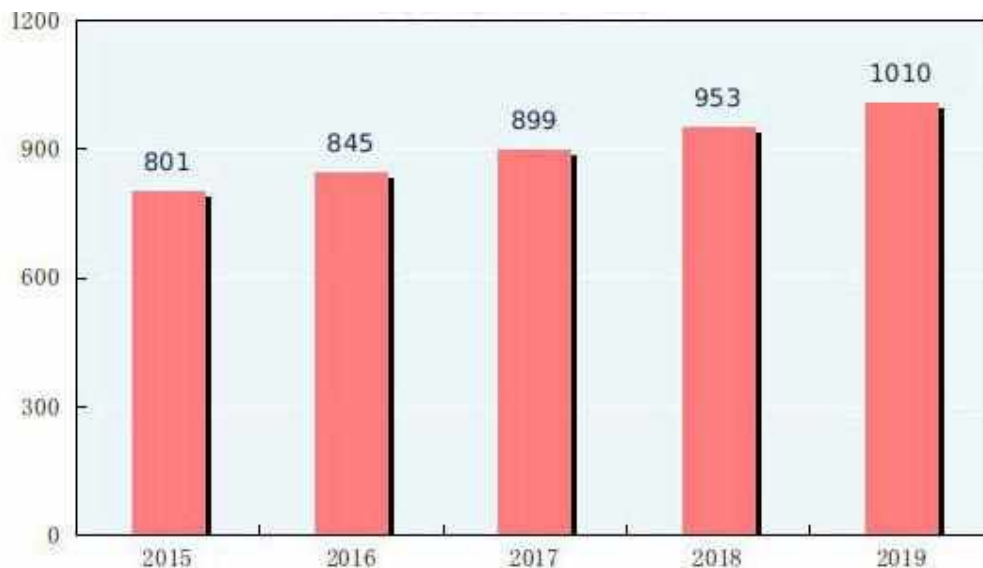
Source: http://www.stats.gov.cn/english/PressRelease/201902/t20190228_1651335.html

And in “Statistical Communiqué of the People's Republic of China on the 2019 National Economic and Social Development” issued by National Bureau of Statistics of China maintains that by the end of 2019, there were 1,014,000 medical and health institutions in China, including 34,000 hospitals. Of all the hospitals, 12,000 were public, and 22,000 were private. Of the 960,000 medical and health institutions at grass-root level, there were 36,000 town and township health centers, 35,000 community health service

¹⁹⁴⁸ Excerpts from “Statistical Communiqué of the People's Republic Of China on the 2018 National Economic And Social Development” issued by National Bureau of Statistics of China in 2019, available online at url: http://www.stats.gov.cn/english/PressRelease/201902/t20190228_1651335.html

centers, 267,000 clinics and 621,000 village clinics. Of the 17,000 professional public health institutions, 3,456 were disease control and prevention centers and 3,106 were health monitoring institutions. By the end of 2019, there were 10.10 million medical technical personnel in China, including 3.82 million licensed doctors and licensed assistant doctors and 4.43 million registered nurses. The medical and health institutions in China possessed 8.92 million beds, of which, hospitals possessed 6.97 million and township health centers had 1.38 million. The total number of medical visits and hospital discharges in 2019 reached 8.52 billion and 270 million respectively.¹⁹⁴⁹

Year-end Number of Medical Technical Personnel (2015-2019)



Source: http://www.stats.gov.cn/english/PressRelease/202002/t20200228_1728917.html

10.1.3 Healthcare Insurance System in China

World Health Report (2010) titled “Health insurance systems in China: A briefing note” published by World Health Organisation maintains the following:

i) Between the 1950s and mid-1970s in China, health insurance was organized around rural agricultural communes or urban place of employment. Since the 1950s, rural populations were covered under cooperative medical schemes managed by agricultural communes. For urban populations, the Labour Insurance System (LIS) was established in 1951 for employees of state-owned enterprises (SOEs) and collectively-owned enterprises and their dependents. The Government Insurance System (GIS) was established in 1952 for government staff and retired government staff, and university students. Health care was provided through public facilities at three levels. Barefoot doctors in agricultural communes and workplace clinics provided primary care; (rural) township hospitals and (urban) district hospitals provided secondary care; and county and city hospitals offered tertiary care. Services were paid through health insurance

¹⁹⁴⁹Excerpts from “Statistical Communiqué of the People's Republic of China on the 2019 National Economic and Social Development” issued by National Bureau of Statistics of China published on February, 28, 2020, available online at URL: http://www.stats.gov.cn/english/PressRelease/202002/t20200228_1728917.html

payments (usually for medicines), but funding was primarily channelled to public facilities. Out of pocket fees were minimal, resulting from caps on supply inputs and universal insurance coverage.

ii) After 1978, the government transformed itself from a closed centralized planned economy to a market economy over a relatively short period in an overall effort to privatize China's economy and reduce the role of the central government in regional affairs. Agricultural communes were replaced by household production units and profit-making villages. These changes resulted in rapid economic growth. Between 1978 and 2007, GDP grew by 9.8% annually; the number of absolute poor fell from 250 to 15 million between 1970 and 2007. At the same time, local governments were given the responsibility for health care. With the dissolution of the rural cooperatives, rural households lost their health insurance, leading to a sharp decline in coverage from nearly universal levels in 1978 to 7% in 1999. In urban areas, state owned enterprises (SOEs) were granted higher autonomy. Many SOEs closed; employees lost their jobs and health insurance coverage. User fees were implemented as public funding declined, and out of pocket payments increased.

iii) Between the mid-1980s and mid-1990s, China's health sector expanded based on the need to attract private spending. This resulted in the rapid growth of infrastructure, medicines, and medical products and devices concentrated in urban areas and tertiary hospitals. Sales of medicines and services became a central part of health facility income. With increasing costs, particularly for hospitals, accessing health care became more difficult for those who could not pay. One inpatient episode was estimated to amount to two-thirds of average annual household expenditures in urban areas. Growing inequities in service utilization and health outcomes were reported between rural and urban areas. The gaps in disease profile, access, quality, and health investments by geographic region continued to increase, with the western and poorer regions facing greater problems.

iv) In 1997, the first health sector reform proposal was initiated by the Communist Party Committee and the State Council. This proposal included the urban employee-based medical insurance (UE-BMI) and the expansion of rural cooperative medical scheme. In 1994, the State Council carried out pilot reforms of the basic medical social insurance scheme for urban employees in Zhenjiang City, Jiangsu and Jiujiang City, Jiangxi Province. After 4 years, this salary-oriented social insurance plan was launched in 1998, as the Basic Medical Insurance (BMI), was created by the central government for urban formal sector workers. The BMI covered those eligible for LIS or GIS, as well as employees of private sector companies and small public firms. Since 1997, efforts have been made to replace LIS and GIS with a single scheme under a larger pool and, by 2003, more than half of urban employees were covered by one or more kinds of insurance. However, the 1997 reforms were not fully implemented because of a lack of financial and political commitments.

v) After the SARs outbreak in early 2003, greater attention was paid to health reform. Some 30% of poor households were reporting health care costs as a main cause of their poverty. The public became increasingly vocal about unaffordable health care, impoverishment from medical expenses, and inequalities across regions. Between 2003 and 2008, insurance reforms were implemented to improve access and utilization, reduce costs, and provide higher risk protection, particularly for rural populations,

primarily to redress inequalities between rural and urban areas. Most programs were initiated as pilots, to be able to accumulate lessons learned prior to scaling up nationwide. In 2003, the government implemented a pilot in four provinces and 333 counties to revamp and expand the rural cooperative medical schemes. Renamed the New Rural Cooperative Medical Scheme (NCMS), the program was quickly expanded to cover more than 800 million rural residents across all counties. Between 2003 and 2005, the Medical Financial Assistance (MFA) program was established to cover catastrophic health expenses for the poor, with a focus on the estimated 5% covered by the three major social assistance programs. Large-scale infrastructure investments also took place. Between 2003 and 2007, the government's Rural Health Services Construction and Development Program invested more than US\$2 billion in rural health infrastructure and equipment nationwide. At the same time, there was rapid expansion in the supply of hospitals. Between 2000 and 2008, the number of general hospitals increased by 23%, and specialist hospitals more than doubled. The total number of general hospitals with over 800 beds increased nearly 5-fold between 2000 and 2008.¹⁶ In 2004, reforms in provider payment mechanisms became more systematic. In recognition that user fee systems provided strong incentives for over utilization of services and medicines, more systematic experimentation began in alternative provider payment mechanisms including diagnostic related groups (DRGs) for hospitals, capitation at primary level, and prepayment for maternal and child (MCH) services. In 2004, the MoH started experiments across seven provinces in hospital case based payments, many of which established fixed payment rates for specific diseases, based on data about prior years' health care costs. Usually, however, case-based payment systems were initiated by hospitals that wanted to attract more patients by capping their out-of-pocket costs. By 2007, some 22% of total hospitals (more than 4000 facilities) were implementing case-based payment systems designed and managed by the regional governments, hospitals, or in some cases the NCMS and BMI managers.

Three major health insurance programs cover specific groups: rural residents under the New Rural Cooperative Medical Scheme (NCMS), urban employees under the Urban Employees Basic Medical Insurance (UR-BMI), and unemployed urban residents under the Urban Residents Basic Medical Insurance (UR-BMI). The three schemes function differently in how they are financed and operate. Under the Ministry of Health, the NCMS as a voluntary program has expanded rapidly from 333 participating counties in 2003 to 2176 counties by 2009. Insurance coverage among rural residents increased more than seven-fold from 13 to 92% between 2003 and 2008.³¹ By 2009, 94% of rural residents had insurance coverage: 90% from the NCMS and 4% from other social health insurance programs. County level governments determine the design of the NCMS for a rural population of about 840 million people. The UE-BMI, established in 1998, is a mandatory program for approximately 300 million urban employees administered at municipal level. The UE-BMI is currently estimated to cover about 67% of urban employees. The UR-BMI is the newest scheme intended to cover 200 million children, students, elderly, disabled, other non-working urban residents. It was piloted in 79 cities in 2007, and has been rolled out nationwide. By the end of 2008, it covered 60.4% of the target population. Municipal governments determine the program's design and reimbursement schemes.

Overview of the three main health insurance programs in China

Characteristic	New Rural Cooperative Medical Scheme (NCMS) ³²	Urban Employee-Basic Medical Insurance (UE-BMI) ³³	Urban Residents-Basic Medical Insurance (UR-BMI)
Administration	County level (2176 counties)	Municipal level	Municipal level
Local government authority	Counties determines the deductible, ceiling, reimbursement ratio, medical savings account	Wide variations across municipalities in eligibility, financing, benefits packages	Wide variations across municipalities in eligibility, financing, benefits packages
Date started	2003 (Old rural cooperative medical scheme at village in place since 1950s.)	1998	2007 (79 pilot cities) 2010 target-all cities
Participation	Voluntary at household	Mandatory for individuals	Voluntary at household
Populations	Rural residents	Urban employed	Children, students, elderly, disabled, other non-working urban residents
Target	Est. 840 million	Est. 300 million	Est. 200 million
Current coverage	94.2% (2009)	67% (200 million, end 2008)	60.4% (118 million, end 2008)
Revenues (billion RMB)	94.435 billion RMB (13.9 billion USD) (2009)	270.9 billion RMB (39.8 billion USD)	15.4 billion RMB (2.3 bill USD)
Expenditures (billion RMB)	92.292 billion RMB (13.6 billion USD) (2009)	201.6 billion RMB (29.6 billion USD)	6.7 billion RMB (985 mill USD)
Source of revenues	100 RMB/year (2009) For western areas, the contribution is 40 RMB each from local and central government, and 20 from individuals. The central contribution to eastern provinces tends to be lower, compensated by higher provincial or municipal contributions.	8% of employee wages: "6+2": 6% payroll tax on employers (ranging from 4 to 1 % by municipality) and 2% employee contribution Medical savings accounts generally cover OP expenses, medicines (employer contribution + 30% of employee contribution)	Average 245 RMB for adults, 113 RMB for minors (pilots 2008). In 2008, the government contribution was at least 80 RMB /person, with a central level contribution to west and central areas of 40 RMB/ person. Provincial contributions vary. The poor and disabled receive an additional 60 RMB per year (50% from central).

Source: WHO Available at:

https://www.who.int/healthsystems/topics/financing/healthreport/37ChinaB_YFINAL.pdf

Benefit models and reimbursement for the three main health insurance programs

Characteristic	New Rural Cooperative Medical Scheme (NCMS) ⁴¹	Urban Employee-Basic Medical Insurance (UE-BMI) ⁴²	Urban Residents-Basic Medical Insurance (UR-BMI)
Models	4 main models exist. In 2009: a) 47% of counties reimburse IP services based on formula; OP services and preventive care paid through medical savings accounts (MSA). b) 41% of counties use the same model for IP but there is no MSA. OP services reimbursed with pooled funds. c) 8% of counties reimburse IP and OP services for catastrophic diseases with separate deductibles and reimbursement caps d) 4% reimburse IP and OP services from both MSA and pooled funds.	2 main parts: social pooled funds (SPF) and medical savings accounts (MSA) In the plate model, OP expenses are reimbursed by MSA until spent; pooled fund (SFA) covers IP and catastrophic expenses. In the corridor model, the MSA pays below deductible for IP and OP, and SPF pays a fixed percent above the deductible.	Pooled funds used mainly for hospitalization fees and key diseases treated on OP basis. Some cities have established MSAs.
Inpatient reimbursement	Average 41. % (2009)	Average 65% (2008); differs widely by city, financial capacity, and disease condition. Inpatient coverage with pooled fund (70% of employee contribution)	Average 45% (pilot 2007)
Inpatient deductible	100 (0-200) Township hospitals 250 (100-500) County hospital 800 (0-2000) Provincial hospital	For pooled account: 10 % of the local average payroll	0-2700 RMB (7 city survey, 2008)
Reimbursement ceilings	For inpatient care, average 30,000 RMB (range 8,000-180,000 RMB) (2009)	Pooled account: 4 times average payroll (2009)	25,000-100,000 RMB (7 city survey, 2008)

Source: WHO Available at:

https://www.who.int/healthsystems/topics/financing/healthreport/37ChinaB_YFINAL.pdf

The Medical Financial Assistance (MFA) program and basic medical insurance. The Medical Financial Assistance (MFA) program forms an important part of the health security system. Valued by both the State Council and local governments, it provides an important guarantee for protecting the health of poor residents and in reducing medically induced poverty. The rural and urban MFA systems were launched in 2003 and 2005 separately as pilots, and were expanded nationwide in 2006 and 2008. As the MFA system gradually expanded, its objectives also expanded from subsistence allowances for low-income elderly or disabled residents to ensuring more comprehensive care for the poor. The number of diseases covered in the program expanded from a few serious conditions to a comprehensive range of both inpatient and outpatient services. It forms a part of the three-dimensional medical assistance system, which includes funding to the poor to access NCMS and UR-BMI in rural and urban areas, respectively; coverage above eligible insurance reimbursements; and temporary medical assistance. An increasing number of local governments covers outpatient services for common diseases under the program, and have strengthened the interface between MFA and basic medical insurance (BMI) systems. By the end of 2009, 93.37 million poor residents were covered by urban and rural MFA. Approximately one-third (30.70 million) are urban poor residents (about 4.9% of urban residents), and the remaining 62.67 million are rural poor residents (about 8.8% of rural residents). The MFA is financed by government at all levels (central, provincial, city, and district governments), sourced from welfare lottery, social donations

and fund interest income. By the end of 2009, government funding from all levels had accumulated to more than 36.74 billion RMB (US\$ 5.4 billion) on urban and rural MFA, including 15.53 billion RMB (US\$ 2.28 billion) for urban MFA and 21.21 billion RMB (US\$ 3.1 billion) for rural MFA. Of this total, the central government and local governments invested 19.06 billion RMB (US\$ 2.8 billion) and 17.68 billion RMB (US\$ 2.6 billion) respectively. Figure 4 illustrates the increase in MFA funding from 2005 to 2009. Total funding for urban and rural MFA increased from 2.2 billion to 13.1 billion RMB, excluding prior year's surplus funds, an increase of 5.8 times and with an average annual growth of 55.5%, in which the central government financial input has increased to 8.1 billion RMB (US\$ 1.2 billion) in 2009 from 600 million RMB in 2006. The proportion of central government funding has gradually increased from 26.8 to 61.5% of total funding.

MFA gradually strengthened the interface with the basic medical insurance system by funding premiums to participate in the NCMS or UR-BMI, and implementing payments beyond the compensation of basic medical insurance. By the end of 2009, total urban and rural MFA had provided funds to more than 170 million poor people to participate in the new rural cooperative medical schemes or basic medical insurance for urban residents. Among these beneficiaries, 12.8 million and 43.7 million poor residents accessed UR-BMI and NCMS, respectively, as a result of the support from MFA.¹⁹⁵⁰

An article titled “China's healthcare sector promising for 2020 and beyond” looks at some of the main trends in the Chinese healthcare and medical sector and observe the potential of some of its most promising developments, especially in the fields of health technology and medical artificial intelligence.¹⁹⁵¹

i) A look at health statistics: China constantly improving

If we look at the statistics for recent years, we can observe an increase in spending for healthcare as well as a drastic improvement in the overall health of Chinese citizens, indicating not only the economic growth of the healthcare sector but also its efficiency. Per capita healthcare spending in China has risen from \$42 in 2000 to \$398 in 2016, according to World Bank statistics. However it has simultaneously remained comparatively low in relation to GDP per capita, which is considerably small at 4.9 percent, compared to the US at 17 percent in 2017, for example. China has passed Japan in total healthcare spending in 2016 with \$574 billion compared to Japan's \$469 billion and passed the US in hospital beds per 1,000 persons, with 3.8 for China and only 2.9 in the US according to OECD data. Compared with 2.75 in 2011, China is seeing some of the fastest growth in this category, putting it ahead of countries such as Norway, Canada and the UK. This is in part due to Chinese government policies such as increased funding for hospitals in recent years. The numbers of doctors per 1,000 inhabitants has also been continuously rising in China since 2002, from 1.13 to 2.01 in 2017, according to OECD health data, putting it above the East Asia and Pacific average. A similar development is seen in the number of nurses per 1,000 inhabitants, with 1 in 2004 rising to 2.7 in 2017.

¹⁹⁵⁰ https://www.who.int/healthsystems/topics/financing/healthreport/37ChinaB_YFINAL.pdf

¹⁹⁵¹ <https://www.chinadaily.com.cn/a/201912/25/WS5e02bfeaa310cf3e35580799.html>

Note: To procure figures on Healthy China Action, please access National Health Commission of PRC's website at the following URL: http://en.nhc.gov.cn/2019-07/18/c_75639.htm

The maternal mortality rate is equally impressive for China, having plunged from 97 per 100,000 births in 1990 to only 27 in 2015 according to the World Bank. Life expectancy has also continuously risen in China. According to statistics for the United Nations World Population Prospects, the current life expectancy for China in 2019 is 76.79 years, a 0.22 percent increase from 2018, putting it significantly higher than the world average life expectancy of about 72 years. The UN projects a similar rate of increase for the rest of the 21st century for China.

ii) China's healthcare sector is growing

The article also refers to the growth of China's healthcare sector and the reasons for it. The growing healthcare sector is in many aspects a by-product of China's recent economic rise. Several hundred million people were lifted out of poverty in recent decades, which led to overall higher living standards and affordability of healthcare services. This in turn created the continuously rising life expectancy, with more people reaching retirement age than ever before, which further increases the demand for healthcare services. However, the effect of government policies and measures is not to be underestimated in this trend. Within the last two decades China has benefited from large-scale reforms in the fields of medical infrastructure and insurance as well as the opening-up of its healthcare market. Focus has been laid on not only developing urban areas, but also continuously making healthcare more accessible in rural China, boosting development and the number of hospitals, doctors and medical equipment. However, the most important contributor might be that, according to the State Council, China has created the world's largest network for basic medical insurance accessible for all and formed a healthcare service system encompassing both urban and rural areas. By the end of 2016, basic medical insurance has reached over 1.3 billion citizens nationwide, accounting for more than 95 percent of the total population. The World Bank also described China's achievement in extending health insurance to 1.3 billion people as an "unparalleled" accomplishment. All these factors in turn create an interesting market for foreign investors in the healthcare field. Also, although the medical industry is growing fast in China, the demands for further healthcare services are growing even faster. This makes it even more attractive to investors, as it opens up new market opportunities. The government has understood this, and initiated measures to boost foreign investment in this field. Manufacturers of raw materials for the production of vaccines and cell-therapy drugs and those investing in medical institution services can now access preferential treatment, such as tax incentives, streamlined procedures or discounted land prices. Furthermore, the Chinese government introduced a new law permitting foreign investors to hold a 100 percent ownership of private hospitals in 2014. In 2019, subsectors of both the pharmaceutical and healthcare industries were added to the 2019 Foreign Investment National Encouraged Catalogue.¹⁹⁵²

iii) Health tech and medical AI

To tackle overcrowded hospitals in an innovative way, the government made it clear that health technology is a strategic area of development for China. It features heavily in both the 13th Five-Year Plan (2016-2020) and its Healthy China 2030 strategy. In April 2018,

¹⁹⁵² <https://www.chinadaily.com.cn/a/201912/25/WS5e02bfeaa310cf3e35580799.html>

the State Council also issued new guidelines to promote internet-based healthcare, encouraging medical institutions to leverage internet-based technologies to improve the efficiency of medical services. China's large number of smartphone and internet users (700 million today) provides large potential for more technology use in healthcare subsectors. Everything can be done via apps in the future – also called "fingertip medical treatment". Data from the National Health Commission showed that in 2017, China's online healthcare market reached 32.5 billion yuan (\$4.6 billion), 45.87 percent higher than that of the previous year. Industry experts estimated the market will grow to 90 billion yuan by 2020. Tencent for example has already been steadily building up a network of participating hospitals – over 38,000 medical facilities as of 2017 – where users can book doctor's appointments through their WeChat Intelligent Healthcare to avoid long lines at medical facilities. Following their health checkup, patients can also conveniently access their medical reports through WeChat and pay for their medical bills. Also, China is a frontrunner in the field of medical AI. In 2018, Alibaba's health unit introduced AI software that could help interpret CT scans and an AI medical lab to help doctors make diagnoses. Deep-learning algorithms trained through the data of billions can analyse medical outputs like CT and MRI images with a close to 100 percent accuracy. Tencent established the AI Medical Innovation System or AIMIS, an AI-powered diagnostic medical imaging service, available so far in over 10 hospitals across the country. The method works as follows: Images of patient tissue are fed into the AI software, which can then determine in under four seconds whether the body looks normal, inflamed or cancerous. In 2017, a robot named Xiaoyi passed the written stage of China's national medical licensing examination. Sifting through more than 2 million medical records and 400,000 articles, it achieved 456 points – 96 points above a passing grade. In the future, a robot like this could help make an initial diagnosis. By scanning data, it would relieve some of the burden of doctors, instead of replacing them. Currently, over 130 Chinese companies are working on applying AI in healthcare.¹⁹⁵³

¹⁹⁵³ <https://www.chinadaily.com.cn/a/201912/25/WS5e02bfeaa310cf3e35580799.html>

Health care Institutions in China.

Year Region	Total	Hospitals				Health Care Institutions at Grass-root Level					Specialized Institutions				
		General Hospitals	Hospitals Specialized in Traditional Chinese Medicine	Specialized Hospitals		Health Care Institutions at Grass-root Level	Community Health Service Centers	Township Health Centers	Village Clinics	Outpatient Departments	Specialized Public Health Institutions	Center for Disease Control and Prevention	Specialized Disease Prevention & Treatment Institution	Women and Children Care Agencies	Health Inspection Institutions (center)
1978	109732	9293	7539	447	643			55018		94395		2909	887	2571	
1980	109553	9902	7859	678	694			55413		102474		3105	1138	2745	
1985	978540	11955	9197	1495	938			47387	777674	126604		3410	1566	2396	
1990	1012690	14377	10424	2115	1362			47749	803956	129332		3518	1781	3148	
1995	954409	15663	11586	2361	1445			51797	804352	104406		3729	1856	3179	
2000	1034225	16318	11872	2453	1543	1000169		49229	709458	24934	11386	3741	1939	3163	
2005	882205	18703	12982	2620	2682	849488	17128	40507	583209	207457	11177	3565	1502	3021	1702
2006	918097	19246	13120	2665	3022	884818	22656	39575	609128	212043	11269	3548	1402	3083	2057
2007	912663	19852	13372	2720	3282	878686	27069	39876	613855	197083	11528	3585	1365	3051	2553
2008	891480	19712	13119	2688	3437	858015	24260	39080	613143	180752	11485	3534	1310	3011	2675
2009	916571	20291	13364	2728	3716	882153	27308	38475	632770	182448	11665	3536	1291	3020	2809
2010	936927	20918	13681	2778	3956	901709	32739	37835	648424	181781	11835	3513	1274	3025	2992
2011	954389	21979	14328	2831	4283	918003	32860	37295	662894	184297	11926	3484	1294	3036	3022
2012	950297	23170	15021	2889	4665	912620	33562	37087	653419	187032	12083	3490	1289	3044	3068
2013	974398	24709	15887	3015	5127	916368	33965	37015	648619	195176	31165	3516	1271	3144	2967
2014	981432	25860	16524	3115	5478	917335	34238	36902	645470	200130	35029	3490	1242	3098	2975
2015	983528	27587	17430	3267	6023	920770	34321	36817	640536	208572	31927	3478	1234	3078	2986
2016	983394	29140	18020	3462	6642	926518	34327	36795	630763	218187	24886	3481	1213	3063	2986
2017	986649	31056	18921	3695	7220	933024	34652	36551	632057	222221	19886	3456	1200	3077	2992
2018	997433	33009	19893	3977	7900	943639	34997	36461	622001	249654	18033	3443	1161	3080	2949
Beijing	10058	648	548	100	183	9172	1951		2493	4720	110	29	24	20	18
Tianjin	5686	420	270	55	32	5101	801	141	2511	1843	96	23	15	20	19
Hebei	85088	2108	1470	343	352	82236	1385	2005	59047	19795	684	188	12	187	178
Shansi	42079	1368	654	213	469	40198	965	1313	28338	9285	449	135	8	134	128
Inner Mongolia	24610	818	424	117	159	23235	1197	1301	13539	7198	488	118	50	114	113
Guangdong	36029	1359	761	186	385	33777	1325	1032	19127	12275	672	122	72	102	74
Jilin	22691	780	417	108	237	21371	378	777	9901	18316	406	66	55	70	41
Heilongjiang	20349	1105	729	161	196	18460	614	972	10740	6130	736	165	55	145	138
Shanghai	5293	358	171	19	120	4729	1038		1192	3529	108	19	16	20	17
Jiangsu	53254	1853	1029	136	473	50295	2769	1053	15311	11158	808	117	41	114	104
Zhejiang	32754	1298	555	171	473	30883	5312	1155	11483	12922	393	100	16	89	89
Anhui	24925	1140	723	113	262	23076	1891	1365	15317	4502	694	120	45	120	111
Fujian	27590	641	369	80	174	26423	691	681	18283	6568	450	97	25	90	86
Hubei	36545	716	450	106	147	35020	556	1588	28389	4561	730	147	108	112	111
Shandong	81470	2590	1550	290	646	77814	2443	1592	53246	20285	1081	175	132	162	108
Henan	71351	1825	1118	287	371	67730	1498	2042	56173	8011	1589	180	21	163	178
Hubei	36486	955	561	123	279	34912	1161	1139	24411	8180	504	116	74	103	106
Hunan	56239	1552	877	174	454	53788	791	2208	39976	10819	851	147	86	137	133
Guangdong	91491	1553	882	167	458	48894	2602	1184	25996	18893	1068	136	129	129	124
Guangxi	33742	624	365	96	136	31826	310	1264	28489	9843	1257	118	34	104	115
Hainan	5325	218	158	17	38	4981	177	299	2716	1789	119	24	13	24	24
Chongqing	20524	800	454	110	174	19535	472	872	10847	7332	153	41	15	42	39
Shaanxi	81537	2344	1484	232	552	78427	980	4433	56019	16990	697	208	23	201	200
Guizhou	28066	1309	957	97	222	26374	755	1341	20355	3868	343	100	8	99	95
Yunnan	24954	1280	843	141	267	23100	601	1355	13404	7741	523	163	29	146	142
Tibet	8844	158	108	11	11	6539	14	678	5288	549	145	82		56	1
Shanxi	35300	1175	764	183	230	33412	625	1544	24183	7050	613	120	5	116	116
Gansu	27897	826	354	100	120	25785	626	1376	16487	7291	1394	103	6	99	95
Qinghai	4396	220	124	14	40	5994	256	495	4474	859	178	56	1	50	55
Ningxia	4450	231	163	26	45	4121	184	217	2300	1420	88	25		21	24
Xinjiang	18450	907	671	82	115	16833	839	929	10146	4919	697	215	3	91	158

Medical Technical Personnel in Healthcare Institutions per 1000 persons

Year Region	Medical Technical Personnel			Licensed (Assistant) Doctors			Registered Nurses		
	Total	City	Rural	Total	City	Rural	Total	City	Rural
1980	2.85	8.03	1.81	1.17	3.22	0.76	0.47	1.83	0.20
1985	3.28	7.92	2.09	1.36	3.35	0.85	0.61	1.85	0.30
1990	3.45	6.59	2.15	1.56	2.95	0.98	0.86	1.91	0.43
1995	3.59	5.36	2.32	1.62	2.39	1.07	0.95	1.59	0.49
2000	3.63	5.17	2.41	1.68	2.31	1.17	1.02	1.64	0.54
2005	3.50	5.82	2.69	1.56	2.48	1.26	1.03	2.10	0.65
2006	3.60	6.09	2.70	1.60	2.56	1.26	1.09	2.22	0.66
2007	3.72	6.44	2.89	1.61	2.61	1.23	1.18	2.42	0.70
2008	3.90	6.68	2.80	1.66	2.68	1.26	1.27	2.54	0.76
2009	4.15	7.15	2.94	1.76	2.83	1.31	1.39	2.82	0.81
2010	4.39	7.62	3.04	1.80	2.97	1.32	1.53	3.09	0.89
2011	4.58	7.90	3.19	1.82	3.00	1.33	1.66	3.29	0.98
2012	4.94	8.54	3.41	1.94	3.19	1.40	1.85	3.65	1.09
2013	5.27	9.18	3.64	2.04	3.39	1.48	2.04	4.00	1.22
2014	5.56	9.70	3.77	2.12	3.54	1.51	2.20	4.30	1.31
2015	5.84	10.21	3.90	2.22	3.72	1.55	2.37	4.59	1.39
2016	6.12	10.79	4.04	2.31	3.92	1.61	2.54	4.91	1.49
2017	6.47	10.87	4.28	2.44	3.97	1.68	2.74	5.01	1.62
2018	6.83	10.91	4.63	2.59	4.01	1.82	2.94	5.08	1.80
Beijing	11.88	17.95		4.63	6.98		4.98	7.54	
Tianjin	6.70	9.59	8.11	2.76	3.86	4.66	2.52	3.70	1.70
Hebei	6.10	9.22	4.52	2.80	3.82	2.24	2.29	4.06	1.44
Shaanxi	6.63	13.76	4.30	2.68	5.18	1.89	2.79	6.51	1.53
Inner Mongolia	7.43	13.86	5.32	2.90	5.09	2.21	3.02	6.33	1.88
Liaoning	5.95	10.87	3.96	2.76	4.19	1.70	3.09	5.10	1.51
Jilin	6.80	11.13	5.15	2.86	4.62	2.18	2.82	4.96	1.97
Heilongjiang	6.12	10.44	4.25	2.37	3.87	1.76	2.47	4.79	1.37
Shanghai	8.07	13.63	7.38	2.96	4.94	3.73	3.63	6.17	2.44
Jiangsu	7.33	10.06	5.65	2.90	3.71	2.42	3.23	4.76	2.26
Zhejiang	8.47	12.92	7.36	3.33	4.92	2.99	3.51	5.63	2.86
Anhui	5.27	7.88	3.39	2.01	2.69	1.39	2.37	3.83	1.35
Fujian	6.28	10.73	4.29	2.31	3.99	1.56	2.77	4.96	1.80
Jiangxi	5.32	8.90	3.62	1.88	2.97	1.33	2.39	4.44	1.48
Shandong	7.36	10.94	5.29	2.89	4.21	2.13	3.21	5.12	2.13
Henan	6.47	12.34	3.79	2.46	4.36	1.62	2.74	6.00	1.43
Hubei	6.96	10.25	4.93	2.67	3.61	1.91	3.23	5.12	2.12
Hunan	6.33	12.34	4.41	2.62	4.48	1.98	2.67	6.10	1.64
Guangdong	6.66	11.46	4.21	2.44	4.14	1.69	2.96	5.24	1.71
Guizhou	6.51	9.06	4.14	2.15	3.89	1.32	2.86	4.29	1.66
Hainan	6.82	14.09	4.23	2.39	4.93	1.48	3.21	6.98	1.86
Chongqing	5.75	7.87	4.36	2.46	2.78	1.68	3.07	3.83	1.72
Sichuan	6.74	9.06	4.73	2.46	3.20	1.77	2.96	4.37	1.89
Guizhou	6.82	9.73	4.27	2.26	3.42	1.37	3.03	4.76	1.79
Yunnan	6.26	13.04	4.97	2.06	4.54	1.69	2.83	6.31	2.18
Tibet	5.66	8.43	3.72	2.42	3.78	1.67	1.62	2.96	0.84
Shaanxi	8.49	10.87	6.26	2.66	3.50	1.74	3.57	5.10	2.28
Qinshu	5.96	9.31	4.08	2.26	3.36	1.62	2.44	4.37	1.42
Qinghai	7.39	14.38	4.95	2.68	4.84	1.93	2.91	6.60	1.53
Ningxia	7.71	11.06	4.88	2.82	4.81	1.82	3.38	5.15	1.87
Xinjiang	7.09	14.46	6.43	2.56	5.47	2.26	2.91	6.43	2.56

Source: <http://www.stats.gov.cn/tjsj/ndsj/2019/indexeh.htm>

Hospitalisation Services in Health Institutions by Region (2018)

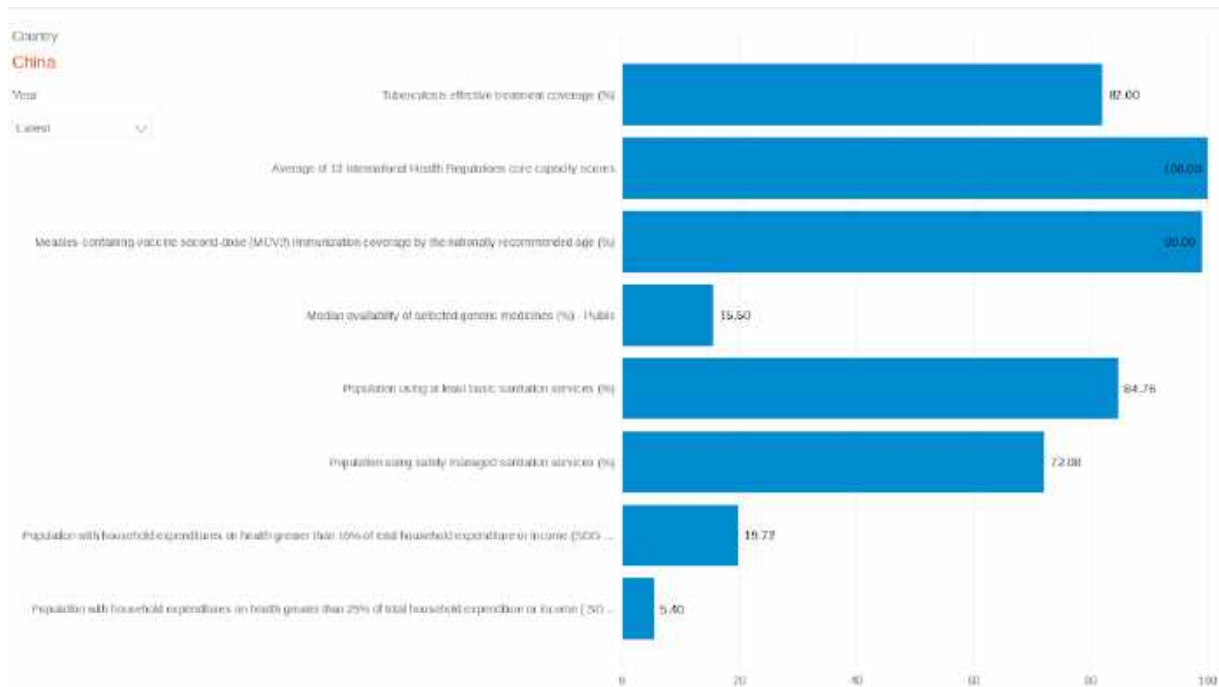
Region	Number of Inpatients (10 000 persons)	Patients Discharged (10 000 persons)	Surgical Operation of Hospitalized (10 000 person-times)	Fatality Rate (%)	Patients Discharged per Beds (person)	Inpatients per 100 Outpatient and Emergency Visits (person)	Annual Hospitalization Rate of Residents (%)
National Total	25454.3	25384.7	6171.6	0.4	30.2	4.5	18.3
Beijing	353.6	353.1	146.6	1.0	28.6	1.6	16.4
Tianjin	162.5	162.5	75.9	0.7	23.8	1.7	10.4
Hebei	1215.2	1205.9	217.8	0.3	28.6	5.7	16.1
Shansi	496.0	494.3	120.7	0.2	23.8	6.0	13.3
Inner Mongolia	384.9	384.0	75.8	0.6	24.2	5.3	15.2
Liaoning	741.7	737.7	179.1	0.9	23.5	5.4	17.0
Jilin	404.4	402.3	79.3	1.0	24.1	5.8	15.0
Heilongjiang	585.2	582.8	142.9	1.0	23.4	7.2	15.5
Shanghai	418.4	418.1	235.2	1.3	30.1	1.7	17.3
Jiangsu	1449.4	1447.5	381.1	0.2	29.6	3.2	18.0
Zhejiang	1019.7	1018.6	346.1	0.3	30.7	2.0	17.8
Anhui	1011.1	1009.7	217.0	0.3	30.8	5.0	16.0
Fujian	574.2	574.7	144.0	0.1	29.9	3.6	14.6
Jiangxi	865.5	861.9	159.1	0.2	34.6	7.6	18.6
Shandong	1841.5	1838.1	416.7	0.4	30.3	5.1	18.3
Henan	1916.4	1911.0	357.4	0.2	31.4	5.5	20.0
Hubei	1319.4	1317.7	332.7	0.4	33.5	5.8	22.3
Hunan	1537.3	1537.7	254.9	0.1	31.9	9.0	22.3
Guangdong	1710.1	1708.7	734.6	0.5	33.1	2.8	15.1
Guangxi	932.0	929.5	181.9	0.4	36.3	5.3	18.9
Hainan	119.4	119.5	26.0	0.3	26.7	3.2	12.8
Chongqing	705.4	703.3	147.3	0.4	32.0	6.8	22.7
Sichuan	1835.3	1827.0	404.3	0.4	30.5	5.6	22.0
Guizhou	815.2	809.6	160.5	0.2	33.0	7.1	22.6
Yunnan	961.4	957.0	229.1	0.2	32.9	5.4	19.9
Tibet	31.1	30.9	5.9	0.2	18.5	3.0	9.0
Shaanxi	798.1	795.0	180.7	0.3	31.4	6.3	20.7
Gansu	487.2	484.8	56.7	0.1	29.9	6.2	18.5
Qinghai	98.5	98.5	16.5	0.3	25.2	5.7	16.3
Ningxia	120.8	120.3	25.7	0.2	29.3	3.9	17.6
Xinjiang	543.2	542.9	109.2	0.4	30.4	6.3	21.8

Source: <http://www.stats.gov.cn/tjsj/ndsj/2019/indexeh.htm>

Number of Reported Cases and Deaths of Infectious Diseases (2018)

No.	Diseases		Deaths	
	Diseases	Number of Diseases	Diseases	Number of Deaths
1	Viral Hepatitis	1280015	AIDS	18780
2	Pulmonary Tuberculosis	823342	Pulmonary Tuberculosis	3149
3	Syphilis	494867	Viral Hepatitis	531
4	Gonorrhea	133156	Hydrophobia	410
5	Dysentery	91152	Encephalitis B	135
6	Scarlet Fever	78864	Hemorrhage Fever	97
7	AIDS	64170	Syphilis	39
8	Brucellosis	37947	Epidemic Encephalitis	10
9	Pertussis	22057	Malaria	6
10	Hemorrhage Fever	11966	Newborn Tetanus	4
11	Typhoid and Paratyphoid Fever	10843	Anthrax	3
12	Dengue Fever	5136	Pertussis	2
13	Measles	3940	Typhoid and Paratyphoid Fever	2
14	Malaria	2518	Gonorrhea	1
15	Encephalitis B	1800	Dysentery	1
16	Hydrophobia	422	Dengue Fever	1
17	Anthrax	336	Measles	1
18	Leptospirosis	157	Leptospirosis	1
19	Schistosomiasis	144	HpAI H7N9	1
20	Epidemic Encephalitis	104	Scarlet Fever	
21	Newborn Tetanus	83	Brucellosis	
22	Cholera	28	Schistosomiasis	
23	HpAI H7N9	2	Cholera	
24	The Plague		The Plague	
25	SARS		SARS	
26	Poliomyelitis		Poliomyelitis	
27	HpAI		HpAI	
28	Diphtheria		Diphtheria	

Source: <http://www.stats.gov.cn/tjsj/ndsj/2019/indexeh.htm>



Source: WHO Data Analysis

Available at: <https://www.who.int/data/gho/data/countries/country-details/GHO/china?countryProfileId=adf73789-9c42-4bc5-a39b-b4d7ba337beb>



Source: WHO Data Analysis

Available at: <https://www.who.int/data/gho/data/countries/country-details/GHO/china?countryProfileId=adf73789-9c42-4bc5-a39b-b4d7ba337beb>

In “2019 Annual Report”, published by Congressional Executive Commission China states the following about Public Health in China:

- Food safety and vaccine safety scandals have continued to flare up in the past year, despite the Chinese government’s attempts in the past decade to improve quality control. Analysts point to a lack of accountability, weak regulatory capacity and enforcement of laws, corruption, and government procurement systems that favour low-cost goods. The National People’s Congress passed a new vaccine management law in June 2019 aimed at

strengthening vaccine supervision, penalizing producers of substandard or fake vaccines, and introducing compensation for victims of faulty vaccines.

- Despite strong regulations aimed at improving food and vaccine safety and punishment for companies and individuals found guilty of criminal acts, authorities also continued to detain citizens for speaking out and organizing protests, including victims and parents of children who received tainted vaccines.
- Chinese authorities reportedly continued to forcibly commit individuals to psychiatric facilities, including government critics and those with grievances against government officials and legal processes, even though the PRC Mental Health Law prohibits such abuses.¹⁹⁵⁴

10.2 Education in China

In a white paper “70s years of human rights” issued by the State Council maintains education for all as one of basic Human Rights. It states that the Universal education expands remarkably. In the early days of the PRC, China’s education system was poor and the general level of education was low. The net primary education enrolment rate was 20 percent and the gross junior secondary education enrolment rate was only 3 percent. There were only 117,000 college students and 80 percent of the population was illiterate. The new Chinese government paid close attention to the development of education. The enrolment rate of school-age children reached 95.5 percent in 1978, and the overall rate of illiteracy had dropped to 22.8 percent by 1982. Since the launch of reform and opening up, China has invested an enormous effort in implementing the education-first strategy, to modernize education and guarantee equal access to education for all. In 2018 the gross three-year preschool education enrolment rate reached 81.7 percent, and the children enrolled in government-funded and privately-run non-profit kindergartens accounted for 73.1 percent of all kindergarteners. The net primary education enrolment rate was 99.95 percent, the gross junior secondary education enrolment rate was 100.9 percent, and the completion rate of the free nine-year compulsory education was 94.2 percent. Availability of senior secondary education in China is now basically universal. In 2018, senior high schools had a total of 39.35 million students on campus. Higher education is becoming universal. In 2018, with 7.91 million newly enrolled students, there were a total of 38.33 million students studying in colleges and universities, representing a gross college enrolment rate of 48.1 percent. A modern vocational education and continuing education system has been established. In 2018, there were 11,600 vocational schools across.¹⁹⁵⁵

¹⁹⁵⁴ Excerpts from “2019 Annual Report”, published by Congressional Executive Commission China, available online at

URL:https://www.cecc.gov/sites/chinacommission.house.gov/files/documents/2019AR_EXECUTIVESUMMARY.pdf

¹⁹⁵⁵ Excerpts from the white paper titled “70 years of Human Rights” by PRC, available online at the URL:

http://english.www.gov.cn/archive/whitepaper/201909/22/content_WS5d87752fc6d0bcf8c4c13d32.html

Note: for further information on major laws and regulations regarding China’s Public Health, Kindly access the following URL: <https://www.cecc.gov/resources/legal-provisions/public-health>

10.2.1 Development of Education System in China

SINCE THE REPUDIATION of the Cultural Revolution (1966-76), the development of the education system in China has been geared particularly to the advancement of economic modernization. Among the notable official efforts to improve the system were a 1984 decision to formulate major laws on education in the next several years and a 1985 plan to reform the education system. In unveiling the education reform plan in May 1985, the authorities called for nine years of compulsory education and the establishment of the State Education Commission (created the following month). Official commitment to improved education was nowhere more evident than in the substantial increase in funds for education in the Seventh Five-Year Plan (1986-90), which amounted to 72 percent more than funds allotted to education in the previous plan period (1981-85). In 1986 some 16.8 percent of the state budget was earmarked for education, compared with 10.4 percent in 1984. Since 1949, education has been a focus of controversy in China. As a result of continual intraparty realignments, official policy alternated between ideological imperatives and practical efforts to further national development. But ideology and pragmatism often have been incompatible. The Great Leap Forward (1958-60) and the Socialist Education Movement (1962-65) sought to end deeply rooted academic elitism, to narrow social and cultural gaps between workers and peasants and between urban and rural populations, and to "rectify" the tendency of scholars and intellectuals disdain manual labour. During the Cultural Revolution, universal education in the interest of fostering social equality was an overriding priority.

The post-Mao Zedong Chinese Communist Party leadership viewed education as the foundation of the Four Modernizations. In the early 1980s, science and technology education became an important focus of education policy. By 1986 training skilled personnel and expanding scientific and technical knowledge had been assigned the highest priority. Although the humanities were considered important, vocational and technical skills were considered paramount for meeting China's modernization goals. The reorientation of educational priorities paralleled Deng Xiaoping's strategy for economic development. Emphasis also was placed on the further training of the already-educated elite, who would carry on the modernization program in the coming decades. Renewed emphasis on modern science and technology, coupled with the recognition of the relative scientific superiority of the West, led to the adoption, beginning in 1976, of an outward-looking policy that encouraged learning and borrowing from abroad for advanced training in a wide range of scientific fields. Beginning at the Third Plenum of the Eleventh National Party Congress Central Committee in December 1978, intellectuals were encouraged to pursue research in support of the Four Modernizations and, as long as they complied with the party's "four cardinal principles"--upholding socialism, the dictatorship of the proletariat, the leadership of the party, and Marxism-Leninism-Mao Zedong Thought--they were given relatively free rein. But when the party and the government determined that the strictures of the four cardinal principles had been stretched beyond tolerable limits, they did not hesitate to restrict intellectual expression. Literature and the arts also experienced a great revival in the late 1970s and 1980s. Traditional forms flourished once again, and many new kinds of literature and cultural expression were introduced from abroad.¹⁹⁵⁶

¹⁹⁵⁶ <http://countrystudies.us/china/63.htm>

10.2.1.1 Education Policy

During the Cultural Revolution, higher education in particular suffered tremendous losses; the system was shut down, and a rising generation of college and graduate students, academicians and technicians, professionals and teachers, was lost. The result was a lack of trained talent to meet the needs of society, an irrationally structured higher education system unequal to the needs of the economic and technological boom, and an uneven development in secondary technical and vocational education. In the post-Mao period, China's education policy continued to evolve. The pragmatist leadership, under Deng Xiaoping, recognized that to meet the goals of modernization it was necessary to develop science, technology, and intellectual resources and to raise the population's education level. Demands on education--for new technology, information science, and advanced management expertise--were levied as a result of the reform of the economic structure and the emergence of new economic forms. In particular, China needed an educated labour force to feed and provision its 1- billion-plus population.

By 1980 achievement was once again accepted as the basis for admission and promotion in education. This fundamental change reflected the critical role of scientific and technical knowledge and professional skills in the Four Modernizations. Also, political activism was no longer regarded as an important measure of individual performance, and even the development of commonly approved political attitudes and political background was secondary to achievement. Education policy promoted expanded enrolments, with the long-term objective of achieving universal primary and secondary education. This policy contrasted with the previous one, which touted increased enrolments for egalitarian reasons. In 1985 the commitment to modernization was reinforced by plans for nine-year compulsory education and for providing good quality higher education.

Deng Xiaoping's far-ranging educational reform policy, which involved all levels of the education system, aimed to narrow the gap between China and other developing countries. Modernizing China was tied to modernizing education. Devolution of educational management from the central to the local level was the means chosen to improve the education system. Centralized authority was not abandoned, however, as evidenced by the creation of the State Education Commission. Academically, the goals of reform were to enhance and universalize elementary and junior middle school education; to increase the number of schools and qualified teachers; and to develop vocational and technical education. A uniform standard for curricula, textbooks, examinations, and teacher qualifications (especially at the middle-school level) was established, and considerable autonomy and variations in and among the autonomous regions, provinces, and special municipalities were allowed. Further, the system of enrolment and job assignment in higher education was changed, and excessive government control over colleges and universities was reduced.¹⁹⁵⁷

10.2.1.2 The Education System¹⁹⁵⁸

To provide for its population, China has a vast and varied school system. There are preschools, kindergartens, schools for the deaf and blind, key schools (similar to college

¹⁹⁵⁷ <http://countrystudies.us/china/64.htm>

¹⁹⁵⁸ <http://countrystudies.us/china/65.htm>

preparatory schools), primary schools, secondary schools (comprising junior and senior middle schools, secondary agricultural and vocational schools, regular secondary schools, secondary teachers' schools, secondary technical schools, and secondary professional schools), and various institutions of higher learning (consisting of regular colleges and universities, professional colleges, and short-term vocational universities). In terms of access to education, China's system represented a pyramid; because of the scarcity of resources allotted to higher education, student numbers decreased sharply at the higher levels. Although there were dramatic advances in primary education after 1949, achievements in secondary and higher education were not as great.

Although the government has authority over the education system, the Chinese Communist Party has played a role in managing education since 1949. The party established broad education policies and under Deng Xiaoping, tied improvements in the quality of education to its modernization plan. The party also monitored the government's implementation of its policies at the local level and within educational institutions through its party committees. Party members within educational institutions, who often have a leading management role, are responsible for steering their schools in the direction mandated by party policy

i) New Directions

The May 1985 National Conference on Education recognized five fundamental areas for reform to be discussed in connection with implementing the party Central Committee's "Draft Decision on Reforming the Education System." The reforms were intended to produce "more able people"; to make the localities responsible for developing "basic education" and systematically implement a nine-year compulsory education program; to improve secondary education develop vocational and technical education; to reform and the graduate-assignment system of institutions of higher education and to expand their management and decision-making powers; and to give administrators the necessary encouragement and authority to ensure smooth progress in educational reform. The National Conference on Education paved the way for the abolition of the Ministry of Education and the establishment of the State Education Commission, both of which occurred in June 1985. Created to coordinate education policy, the commission assumed roles previously played by the State Planning Commission and the Ministry of Education. As a State Council commission, the new State Education Commission had greater status than the old Ministry of Education had had and was in charge of all education organizations except military ones. Although the State Education Commission assumed a central role in the administration of education, the reform decentralized much of the power previously wielded by the Ministry of Education and its constituent offices and bureaus, which had established curriculum and admissions policies in response to the State Planning Commission's requirements. The State Education Commission, with its expanded administrative scope and power, was responsible for formulating guiding principles for education, establishing regulations, planning the progress of educational projects, coordinating the educational programs of different departments, and standardization educational reforms. Simplification of administration and delegation of authority were made the bases for improving the education system. This devolution of management to the autonomous regions, provinces, and special municipalities meant local governments had more decision-making power and were able to develop basic education. State-owned enterprises, mass organizations, and

individuals were encouraged to pool funds to accomplish education reform. Local authorities used state appropriations and a percentage of local reserve financial resources (basically township financial revenues) to finance educational projects.

ii) Compulsory Education Law

The Law on Nine-Year Compulsory Education, which took effect July 1, 1986, established requirements and deadlines for attaining universal education tailored to local conditions and guaranteed school-age children the right to receive education. People's congresses at various local levels were, within certain guidelines and according to local conditions, to decide the steps, methods, and deadlines for implementing nine-year compulsory education in accordance with the guidelines formulated by the central authorities. The program sought to bring rural areas, which had four to six years of compulsory schooling, into line with their urban counterparts. Education departments were exhorted to train millions of skilled workers for all trades and professions and to offer guidelines, curricula, and methods to comply with the reform program and modernization needs.¹⁹⁵⁹

Provincial-level authorities were to develop plans, enact decrees and rules, distribute funds to counties, and administer directly a few key secondary schools. County authorities were to distribute funds to each township government, which were to make up any deficiencies. County authorities were to supervise education and teaching and to manage their own senior middle schools, teachers' schools, teachers' in-service training schools, agricultural vocational schools, and exemplary primary and junior middle schools. The remaining schools were to be managed separately by the county and township authorities.¹⁹⁶⁰

The compulsory education law divided China into three categories: cities and economically developed areas in coastal provinces and a small number of developed areas in the hinterland; towns and villages with medium development; and economically backward areas. By November 1985 the first category--the larger cities and approximately 20 percent of the counties (mainly in the more developed coastal and south-eastern areas of China) had achieved universal 9-year education. By 1990 cities, economically developed areas in coastal provincial-level units, and a small number of developed interior areas (approximately 25 percent of China's population) and areas where junior middle schools were already popularized were targeted to have universal junior-middle-school education. Education planners envisioned that by the mid-1990s all workers and staff in coastal areas, inland cities, and moderately developed areas (with a combined population of 300 million to 400 million people) would have either compulsory 9-year or vocational education and that 5 percent of the people in these areas would have a college education--building a solid intellectual foundation for China. Further, the planners expected that secondary education and university entrants would also increase by the year 2000. The second category targeted under the 9-year compulsory education law consisted of towns and villages with medium-level development (around 50 percent of China's population), where universal education was expected to reach the junior-middle-school level by 1995. Technical and higher education was projected to develop at the same rate.

¹⁹⁵⁹ <http://countrystudies.us/china/65.htm>

¹⁹⁶⁰ *Ibid*

The third category, economically backward (rural) areas (around 25 percent of China's population) were to popularize basic education without a timetable and at various levels according to local economic development, though the state would "do its best" to support educational development. The state also would assist education in minority nationality areas. In the past, rural areas, which lacked a standardized and universal primary education system, had produced generations of illiterates; only 60 percent of their primary school graduates had met established standards. As a further example of the government's commitment to nine-year compulsory education, in January 1986 the State Council drafted a bill passed at the Fourteenth Session of the Standing Committee of the Sixth National People's Congress that made it illegal for any organization or individual to employ youths before they had completed their nine years of schooling. The bill also authorized free education and subsidies for students whose families had financial difficulties.¹⁹⁶¹

iii) Key Schools

"Key schools," shut down during the Cultural Revolution, reappeared in the late 1970s and, in the early 1980s, became an integral part of the effort to revive the lapsed education system. Because educational resources were scarce, selected ("key") institutions--usually those with records of past educational accomplishment--were given priority in the assignment of teachers, equipment, and funds. They also were allowed to recruit the best students for special training to compete for admission to top schools at the next level. Key schools constituted only a small percentage of all regular senior middle schools and funnelled the best students into the best secondary schools, largely on the basis of entrance scores. In 1980 the greatest resources were allocated to the key schools that would produce the greatest number of college entrants.

In early 1987 efforts had begun to develop the key school from a preparatory school into a vehicle for diffusing improved curricula, materials, and teaching practices to local schools. Moreover, the appropriateness of a key school's role in the nine-year basic education plan was questioned by some officials because key schools favoured urban areas and the children of more affluent and better educated parents. In 1985 entrance examinations and the key-school system had already been abolished in Changchun, Shenyang, Shenzhen, Xiamen, and other cities, and education departments in Shanghai and Tianjin were moving to establish a student recommendation system and eliminate key schools. In 1986 the Shanghai Educational Bureau abolished the key junior-middle-school system to ensure "an overall level of education."¹⁹⁶²

10.2.1.3 Modernization Goals in the 1980s

The commitment to the Four Modernizations required great advances in science and technology. Under the modernization program, higher education was to be the cornerstone for training and research. Because modernization depended on a vastly increased and improved capability to train scientists and engineers for needed

¹⁹⁶¹ <http://countrystudies.us/china/65.htm>

¹⁹⁶² Ibid

breakthroughs, the renewed concern for higher education and academic quality--and the central role that the sciences were expected to play in the Four Modernizations--highlighted the need for scientific research and training. This concern can be traced to the critical personnel shortages and qualitative deficiencies in the sciences resulting from the unproductive years of the Cultural Revolution, when higher education was shut down. In response to the need for scientific training, the Sixth Plenum of the Twelfth National Party Congress Central Committee, held in September 1986, adopted a resolution on the guiding principles for building a socialist society that strongly emphasized the importance of education and science.

Reformers realized, however, that the higher education system was far from meeting modernization goals and that additional changes were needed. The Provisional Regulations Concerning the Management of Institutions of Higher Learning, promulgated by the State Council in 1986, initiated vast changes in administration and adjusted educational opportunity, direction, and content. With the increased independence accorded under the education reform, universities and colleges were able to choose their own teaching plans and curricula; to accept projects from or cooperate with other socialist establishments for scientific research and technical development in setting up "combines" involving teaching, scientific research, and production; to suggest appointments and removals of vice presidents and other staff members; to take charge of the distribution of capital construction investment and funds allocated by the state; and to be responsible for the development of international exchanges by using their own funds. The changes also allowed the universities to accept financial aid from work units and decide how this money was to be used without asking for more money from departments in charge of education. Further, higher education institutions and work units could sign contracts for the training of students. Higher education institutions also were assigned a greater role in running interregional and interdepartmental schools. Within their state-approved budgets, universities secured more freedom to allocate funds as they saw fit and to use income from tuition and technical and advisory services for their own development, including collective welfare and bonuses. There also was a renewed interest in television, radio, and correspondence classes. Some of the courses, particularly in the college-run factories, were serious, full-time enterprises, with a two-to three-year curriculum.¹⁹⁶³

i) Entrance Examinations and Admission Criteria

National examinations to select students for higher education (and positions of leadership) were an important part of China's culture, and, traditionally, entrance to a higher education institution was considered prestigious. Although the examination system for admission to colleges and universities has undergone many changes since the Cultural Revolution, it remains the basis for recruiting academically able students. When higher education institutions were reopened in early 1970s, candidates for entrance examinations had to be senior-middle-school graduates or the equivalent, generally below twenty-six years of age. Work experience requirements were

¹⁹⁶³ <http://countrystudies.us/china/69.htm>

eliminated, but workers and staff members needed permission from their enterprises to take the examinations.¹⁹⁶⁴

Each provincial-level unit was assigned a quota of students to be admitted to key universities, a second quota of students for regular universities within that administrative division, and a third quota of students from other provinces, autonomous regions, and special municipalities who would be admitted to institutions operated at the provincial level. Provincial-level administrative units selected students with outstanding records to take the examinations. Additionally, preselection examinations were organized by the provinces, autonomous regions, and special municipalities for potential students (from three to five times the number of places allotted). These candidates were actively encouraged to take the examination to ensure that a sufficient number of good applicants would be available. Cadres with at least two years of work experience were recruited for selected departments in a small number of universities on an experimental basis. Preferential admission treatment (in spite of lower test scores) was given to minority candidates, students from disadvantaged areas, and those who agreed in advance to work in less developed regions after graduation.

In December 1977, when uniform national examinations were reinstated, 5.7 million students took the examinations, although university placement was available for only the 278,000 applicants with the highest scores. In July 1984, about 1.6 million candidates (30,000 fewer than in 1983) took the entrance examinations for the 430,000 places in China's more than 900 colleges and universities. Of the 1.6 million examinees, more than 1 million took the test for placement in science and engineering colleges; 415,000 for places in liberal arts colleges; 88,000 for placement in foreign language institutions; and 15,000 for placement in sports universities and schools. More than 100,000 of the candidates were from national minority groups. A year later, there were approximately 1.8 million students taking the three day college entrance examination to compete for 560,000 places. Liberal arts candidates were tested on politics, Chinese, mathematics, foreign languages, history, and geography. Science and engineering candidates were tested on politics, Chinese, mathematics, chemistry, and biology. Entrance examinations also were given in 1985 for professional and technical schools, which sought to enrol 550,000 new students. Other innovations in enrolment practices, included allowing colleges and universities to admit students with good academic records but relatively low entrance-examination scores. Some colleges were allowed to try an experimental student recommendation system--fixed at 2 percent of the total enrolment for regular colleges and 5 percent for teachers' colleges--instead of the traditional entrance examination. A minimum national examination score was established for admission to specific departments at specially designated colleges and universities, and the minimum score for admission to other universities was set by provincial level authorities. Key universities established separate classes for minorities. When several applicants attained the minimum test score, the school had the option of making a selection, a policy that gave university faculty and administrators a certain amount of discretion but still protected admission according to academic ability. In addition to the written examination, university applicants had to pass a physical examination and a political screening. Less than 2 percent of the

¹⁹⁶⁴ <http://countrystudies.us/china/69.htm>

students who passed the written test were eliminated for reasons of poor health. The number disqualified for political reasons was known, but publicly the party maintained that the number was very small and that it sought to ensure that only the most able students actually entered colleges and universities.

By 1985 the number of institutions of higher learning had again increased--to slightly more than 1,000. The State Education Commission and the Ministry of Finance issued a joint declaration for nationwide unified enrolment of adult students--not the regular secondary-school graduates but the members of the work force who qualified for admission by taking a test. The State Education Commission established unified questions and time and evaluation criteria for the test and authorized provinces, autonomous regions, and special municipalities to administer the test, grade the papers in a uniform manner, and determine the minimum points required for admission. The various schools were to enrol students according to the results. Adult students needed to have the educational equivalent of senior-middle-school graduates, and those applying for release or partial release from work to study were to be under forty years of age. Staff members and workers were to apply to study job-related subjects with review by and approval of their respective work units. If employers paid for the college courses, the workers had to take entrance examinations. In 1985 colleges enrolled 33,000 employees from various enterprises and companies, approximately 6 percent of the total college enrolment. In 1985 state quotas for university places were set, allowing both for students sponsored by institutions and for those paying their own expenses. This policy was a change from the previous system in which all students were enrolled according to guidelines established in Beijing. All students except those at teachers' colleges, those who had financial difficulties, and those who were to work under adverse conditions after graduation had to pay for their own tuition, accommodations, and miscellaneous expenses.¹⁹⁶⁵

ii) Changes in Enrolment and Assignment Policies

The student enrolment and graduate assignment system also was changed to reflect more closely the personnel needs of modernization. By 1986 the state was responsible for drafting the enrolment plan, which took into account future personnel demands, the need to recruit students from outlying regions, and the needs of trades and professions with adverse working conditions. Moreover, a certain number of graduates to be trained for the People's Liberation Army were included in the state enrolment plan. In most cases, enrolment in higher education institutions at the employers' request was extended as a supplement to the state student enrolment plan. Employers were to pay a percentage of training fees, and students were to fulfil contractual obligations to the employers after graduation. The small number of students who attended colleges and universities at their own expense could be enrolled in addition to those in the state plan.¹⁹⁶⁶

Accompanying the changes in enrolment practices were reforms, adopted in 1986, in the faculty appointment system, which ended the "iron rice bowl" employment system and gave colleges and universities freedom to decide what departments, majors, and

¹⁹⁶⁵ <http://countrystudies.us/china/69.htm>

¹⁹⁶⁶ *Ibid*

numbers of teachers they needed. Teachers in institutions of higher learning were hired on a renewable contract basis, usually for two to four years at a time. The teaching positions available on basis were teaching assistant, lecturer, associate professor, and professor. The system was tested in eight major universities in Beijing and Shanghai before it was instituted nationwide at the end of 1985. University presidents headed groups in charge of appointing professors, lecturers, and teaching assistants according to their academic levels and teaching abilities, and a more rational wage system, geared to different job levels, was inaugurated. Universities and colleges with surplus professors and researchers were advised to grant them appropriate academic titles and encourage them to work for their current pay in schools of higher learning where they were needed. The new system was to be extended to schools of all kinds and other education departments within two years.¹⁹⁶⁷

Under the 1985 reforms, all graduates were assigned jobs by the state; a central government placement agency told the schools where to send graduates. By 1985 Qinghua University and a few other universities were experimenting with a system that allowed graduates to accept job offers or to look for their own positions. For example, of 1,900 Qinghua University graduates in 1985, 1,200 went on to graduate school, 48 looked for their own jobs, and the remainder were assigned jobs by the school after consultation with the students. The college students and postgraduates scheduled to graduate in 1986 were assigned primarily to work in forestry, education, textiles, and the armaments industry. Graduates still were needed in civil engineering, computer science, finance, and English.¹⁹⁶⁸

iii) Scholarship and Loan System

In July 1986 the State Council announced that the stipend system for university and college students would be replaced with a new scholarship and loan system. The new system, to be tested in selected institutions during the 1986-87 academic year, was designed to help students who could not cover their own living expenses but who studied hard, obeyed state laws, and observed discipline codes. Students eligible for financial aid were to apply to the schools and the China Industrial and Commercial Bank for low-interest loans. Three categories of students eligible for aid were established: top students encouraged to attain all-around excellence; students specializing in education, agriculture, forestry, sports, and marine navigation; and students willing to work in poor, remote, and border regions or under harsh conditions, such as in mining and engineering. In addition, free tuition and board were to be offered at teachers' colleges, and the graduates were required to teach at least five years in primary and middle schools. After graduation, a student's loans were to be paid off by his or her employer in a lump sum, and the money was to be repaid to the employer by the student through five years of payroll deductions.

iv) Study Abroad

In addition to loans, another means of raising educational quality, particularly in science, was to send students abroad to study. A large number of Chinese students

¹⁹⁶⁷ <http://countrystudies.us/china/69.htm>

¹⁹⁶⁸ *ibid*

studied in the Soviet Union before educational links and other cooperative programs with the Soviet Union were severed in the late 1950s. In the 1960s and 1970s, China continued to send a small number of students abroad, primarily to European universities. In October 1978 Chinese students began to arrive in the United States; their numbers accelerated after normalization of relations between the two countries in January 1979, a policy consistent with modernization needs. Although figures vary, more than 36,000 students, including 7,000 self-supporting students (those who paid their own way, received scholarships from host institutions, or received help from relatives and "foreign friends"), studied in 14 countries between 1978 and 1984. Of this total, 78 percent were technical personnel sent abroad for advanced study. As of mid-1986 there were 15,000 Chinese scholars and graduates in American universities, compared with the total of 19,000 scholars sent between 1979 and 1983.

Chinese students sent to the United States generally were not typical undergraduates or graduate students but were mid-career scientists, often thirty-five to forty-five years of age, seeking advanced training in their areas of specialization. Often they were individuals of exceptional ability who occupied responsible positions in Chinese universities and research institutions. Fewer than 15 percent of the earliest arrivals were degree candidates. Nearly all the visiting scholars were in scientific fields.¹⁹⁶⁹

10.2.1.4 Online and adult education

The participation of big investors in online education has made it a new hotspot for investment in the education industry. Students of remote and under-developed areas are the biggest beneficiaries of online education, but online universities offer students who failed university entrance examinations and working people the chance of lifelong education and learning.

The Ministry of Education has approved 68 ordinary schools of higher learning and the Central Radio and TV University to pilot modern distance education. By the end of 2003, these schools had established 2,027 off-campus learning centres around China, offering 140 majors in ten disciplines, and had a total enrolment of 1.373 million. The gradual spread of broadband technology has also helped online education. The China Education and Research Network (CERNET), started in 1994, is now China's second largest Internet network, covering all major cities of China. The high-speed connection between it and the China Education Broadband Satellite Net, opened in 2000, established a "space to earth" transmission platform for modern distance education, and provided an all-round network supporting environment for distance education. Adult education is both dynamic and diverse. Schools of higher learning for adults include radio and TV, worker, farmer, correspondence and evening universities, management and education colleges; adult secondary schools include vocational, high and skills training schools; worker elementary and farmer elementary schools comprise the adult elementary sector.¹⁹⁷⁰

10.2.1.5 Special education and vocational education

¹⁹⁶⁹ <http://countrystudies.us/china/69.htm>

¹⁹⁷⁰ http://english1.english.gov.cn/2006-02/08/content_182542.htm

In China, the government has always attached importance to special education. A series of laws and regulations ensures disabled people's right to education. Besides schools for special education, any disabled children capable of adapting to regular study conditions can enrol at standard elementary and high schools.

Today, China has 1,540 schools for special education, with 375,000 students; more than 1,000 vocational training institutes for disabled people, nearly 3,000 standard vocational training and education institutes that also admit disabled people; more than 1,700 training organizations for rehabilitating hearing-impaired children, with over 100,000 trained and in-training children. In 2004, 4,112 disabled students entered ordinary schools of higher learning. Of disabled children receiving special education, 63.6 percent of total recruitment numbers and 66.2 percent of enrolment were in ordinary schools or special classes thereof. The Law on Vocational Education was issued in 1996. Vocational education embraces higher vocational schools, secondary skill schools, vestibule schools, vocational high schools, job-finding centres and other adult skill and social training institutes. To enable vocational education to better accommodate the demands of economic re-structuring and urbanization, in recent years the government has remodelled vocational education, oriented towards obtaining employment, and focusing on two major vocational education projects to meet society's ever more acute demand for high quality, skilled workers. These are cultivating skilled workers urgently needed in modern manufacture and service industries; and training rural laborers moving to urban areas. To accelerate vocational education in western areas, the Central Government has used government bonds to build 186 vocational education centres in impoverished western area counties.¹⁹⁷¹

10.2.2 Educational Indicators

Illiterate rate declines and people's education years on the increase¹⁹⁷²

1. Illiterate rate drops year on year

In 1990, the total number of illiterate persons in the country reached 181.56 million and the crude illiterate rate was 15.88 percent. In 2003, the illiterate population dropped to 112.51 million while the crude illiterate rate decreased to 8.72 percent. The illiterate rate of male was 4.8 percent and that of female, 12.8 percent. The illiterate rate of the people at age of 15 to 45 decreased from 10.38 percent in 1990 to 2.39 percent in 2003. The decline of the illiterate rate represented the great efforts made by the Chinese government in improving cultural quality of the Chinese people. Now among the illiterate people at age of 15 to 45, 68.74 percent is female. The illiterate rate of young and middle-aged women was 3.32 percent, 1.84 percentage points higher than the men of same group. It calls for more efforts to enhance the work to help female to study, which will promote the improvement of the quality of young and middle-aged laborers.

¹⁹⁷¹ http://english1.english.gov.cn/2006-02/08/content_182537.htm

Note: An overview of Educational Structure in China can be accessed at the following URL:

<http://english1.english.gov.cn/about/education.htm>

¹⁹⁷² http://english1.english.gov.cn/2005-08/08/content_27315.htm

Comparison on illiterate rates of people at age of 15 or older from 1990 to 2003

Year	Crude Illiterate Rate	Illiterate Rate of People at Age of 15 or Older
1990	15.88	10.38
1993	15.50	7.98
1994	15.45	7.18
1995	12.04	6.14
1996	13.18	6.60
1997	12.11	5.52
1998	11.95	5.20
1999	11.55	4.82
2001	8.99	4.09
2002	9.16	2.99
2003	8.72	2.39

Source: http://english1.english.gov.cn/2005-08/08/content_27315.htm

2. The average years of people's education are on the increase

The average education years refers to the years of diploma education of a certain group of the people (including adult education but not including various non-diploma education). The current education years on the average was 16 years for college education, 12 years for high school education, nine years for junior high school education, six years for elementary school and zero year for illiterate people. In 2003, the average education years of the people at age of 6 or older was 7.91 years, rising 1.65 years over 1990. The major factors were the increasing population with university education as well as the fast development of secondary education.

Average Education from 1990 to 2003

Year	Average Education Years of the People
1990	6.26
1995	6.72
1998	7.09
1999	7.18
2000	7.62
2001	7.68
2002	7.73
2003	7.91

Source: http://english1.english.gov.cn/2005-08/08/content_27315.htm

In 2003, among the population receiving education at various levels, the people received university education accounted for 5.15 percent of the total population; those with high-school education accounted for 12.54 percent; those with junior high school education took up 35.68 percent; those with elementary education took up 31.35 percent. Of 100,000 people received education of various levels, comparing with 1990, the population with university education or higher education rose from 1,422 in 1990 to 5,147 in 2003, rising 2.62 times. Those with high school education rose 55.96 percent, and those with junior high school education rose 52.85 percent. The people with elementary school education decreased 15.67 percent.

Proportions of people with education at various levels from 1990 to 2003 (%)

Year	University	High School	Junior High School	Elementary School
1990	1.42	8.04	23.34	37.17
1993	1.62	8.11	26.14	37.45
1994	1.71	8.20	26.73	37.94
1995	2.03	8.26	27.31	38.43
1996	2.05	8.73	28.90	37.93
1997	2.53	9.59	29.62	37.56
1998	2.58	9.87	30.57	36.81
1999	2.87	9.94	31.85	35.72
2000	3.61	11.15	33.96	35.70
2001	4.09	11.53	34.35	33.83
2002	4.41	11.66	35.25	32.74
2003	5.15	12.54	35.68	31.35

Source: http://english1.english.gov.cn/2005-08/08/content_27315.htm

3. Conspicuous differences on education level between the urban and rural areas

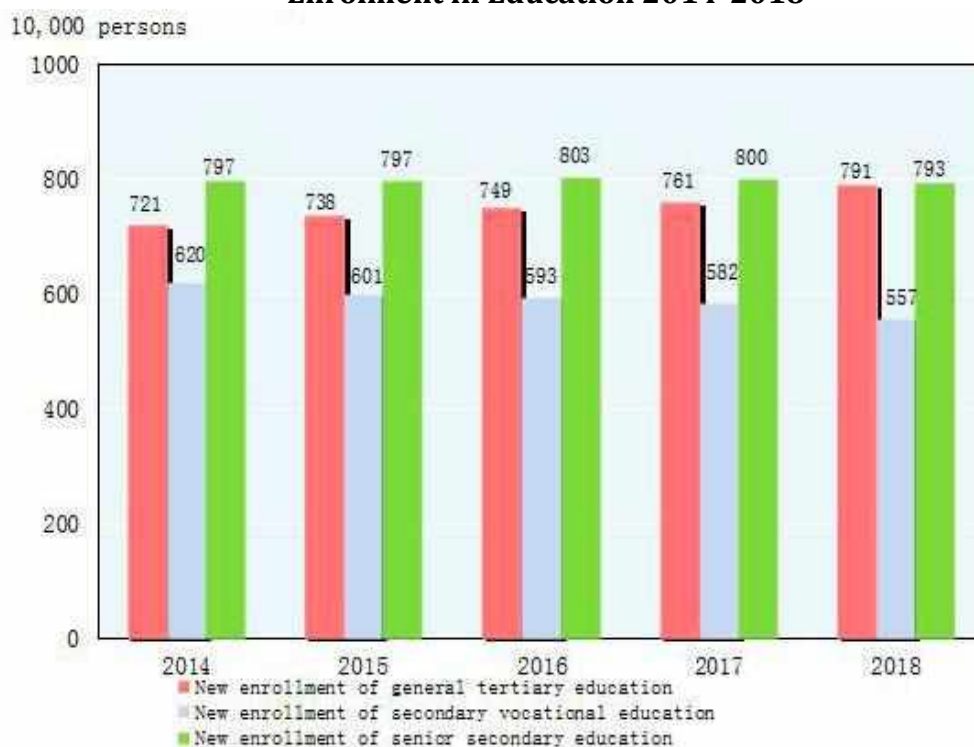
In 2003, the population received elementary school and junior high school education in the rural areas took up 75.14 percent of the total population; the population with high school education accounted for 5.86 percent of the total; that with three-year college education or higher education accounted for only 0.69 percent; the illiterate rate in the rural areas reached 11.17 percent. In the urban areas, the population with high school education or higher education accounted for 33.55 percent of the total population; that with elementary school and junior high school education took up 55.45 percent; the illiterate rate in the urban areas was 5.23 percent. Thus, there is a great gap in education levels between the population in the rural and urban areas. The increase of investment in the education service in the rural areas, especially in the development of basic education, is of strategic significance to narrowing the gap between the rural and urban areas and to the improvement of the cultural quality of the rural population as well as the Chinese nation on the whole. ¹⁹⁷³

In "Statistical Communiqué of the People's Republic of China on the 2018 National Economic and Social Development", National Bureau of Statistics of China states that in 2018, the post-graduate education enrolment was 2.731 million students with 858 thousand new students and 604 thousand graduates. The general tertiary education enrolment was 28.310 million students with 7.910 million new students and 7.533 million graduates. Vocational secondary schools[64] had 15.552 million enrolled students, including 5.570 million new entrants, and 4.873 million graduates. Senior secondary schools had 23.754 million enrolled students, including 7.927 million new entrants, and 7.792 million graduates. Students enrolled in junior secondary schools totalled 46.526 million, including 16.026 million new entrants, and 13.678 million graduates. The country had a primary education enrolment of 103.393 million students, including 18.673 million new entrants, and 16.165 million graduates. There were 666 thousand students enrolled in special education schools, with 124 thousand new entrants and 81 thousand graduates. Kindergartens accommodated 46.564 million children. The

¹⁹⁷³ http://english1.english.gov.cn/2005-08/08/content_27315.htm

number of students graduating from compulsory education reached 94.2 percent of the total enrolment, the gross enrolment rate in senior high schools reached 88.8 percent.¹⁹⁷⁴

Enrolment in Education 2014-2018



Source: http://www.stats.gov.cn/english/PressRelease/201902/t20190228_1651335.html

In “Statistical Communiqué of the People's Republic of China on the 2019 National Economic and Social Development” published by National Bureau of Statistics of China states that in 2019, the post-graduate education enrolment was 2.864 million students with 917 thousand new students and 640 thousand graduates. The general tertiary education enrolment was 30.315 million students with 9.149 million new students and 7.585 million graduates. Vocational secondary schools[70] had 15.765 million enrolled students, including 6.004 million new entrants, and 4.934 million graduates. Senior secondary schools had 24.143 million enrolled students, including 8.395 million new

¹⁹⁷⁴ http://www.stats.gov.cn/english/PressRelease/201902/t20190228_1651335.html

entrants, and 7.892 million graduates. Students enrolled in junior secondary schools totalled 48.271 million, including 16.388 million new entrants, and 14.541 million graduates. The country had a primary education enrolment of 105.612 million students, including 18.690 million new entrants, and 16.479 million graduates. There were 795 thousand students enrolled in special education schools, with 144 thousand new entrants and 98 thousand graduates. Kindergartens accommodated 47.139 million children. The number of students graduating from compulsory education reached 94.8 percent of the total enrolment, and the gross enrolment ratio for senior secondary education reached 89.5 percent.¹⁹⁷⁵

Number of Schools, Educational Personnel and full-time Teachers by type and level (2018)

¹⁹⁷⁵ http://www.stats.gov.cn/english/PressRelease/202002/t20200228_1728917.html

Item	Schools (unit)	Educational Personnel (person)	Full-time Teachers (person)
Higher Education			
Institutions Providing Postgraduate Programs	(815)		
Regular Higher Education Institutions	(580)		
Research Institutions	(235)		
Regular Higher Education Institutions	2663	2487544	1672753
HEIs Offering Degree Programs	1245	1800964	1174334
Independent Institutions	265	163928	123958
Higher Vocational Colleges	1418	685266	497682
Other Institutions	(22)	1314	737
Adult HEIs	277	36027	21908
Other Non-government HEIs	(786)	19681	9107
Secondary Education	76746	8007965	6289410
Senior Secondary Education	24320	3811458	2948232
Senior Secondary Schools	14091	2745154	1814713
Regular Senior Secondary Schools	13737	2742521	1812584
Combined Secondary Schools	354	107065	537624
Regular High Schools	6898	1352245	1199404
11-Year Schools	1427	328211	75556
Adult High Schools	364	2633	2129
Secondary Vocational Education	10229	1066304	833519
Regular Specialized Secondary Schools	3322	397538	304959
Adult Specialized Secondary Schools	1097	51906	39510
Vocational Senior Secondary Schools	3431	339456	282996
Skilled Workers Schools	2379	266711	198058
Other Institutions	(285)	10693	7996
Junior Secondary Education	52426	4196507	3641178
Junior Secondary Schools	51982	4193767	3638999
Regular Junior Secondary Schools	35275	2779555	2547534
9-Year Schools	16696	1413893	591283
12-Year Schools			86243
Combined Secondary Schools			413647
Vocational Junior Secondary Schools	11	319	292
Adult Junior Secondary Schools	444	2740	2179
Primary Education	170269	5751498	6162307
Regular Primary Schools	161811	5732525	6091908
Primary Schools	161811	5732525	5372468
9-Year Schools			642135
12-Year Schools			77305
Adult Primary Schools	8398	18973	10399
Literacy Courses	5211	12556	6363
Correctional Work-Study Schools	92	2856	2099
Special Education Schools	2152	68087	58656
Pre-school Education Institutions	266677	4531454	2581363

Source: <http://www.stats.gov.cn/tjsj/ndsj/2019/indexeh.htm>

Number of Students of Formal Education by type and level (2018)

Item	Graduates	Enbants	Enrolment
Higher Education			
Postgraduates	604368	657966	2731257
Doctor's Degree	60724	96502	389518
Master's Degree	543644	762464	2341739
Undergraduate in Regular HEIs	7533087	7909931	28310348
Normal Courses	3868358	4221590	16973343
Short-cycle Courses	3664729	3688341	11337005
Undergraduate in Adult HEIs	2177408	2733119	5909878
Normal Courses	895661	1400380	2971134
Short-cycle Courses	1181557	1332739	2938744
Web-based Undergraduates	1949189	3209064	8256653
Normal Courses	681915	1044360	2825757
Short-cycle Courses	1267274	2164704	5430796
Secondary Education	26532791	29523486	86027102
Senior Secondary Education	12701215	13497555	36346687
Senior Secondary Schools	7828452	7927063	23794053
Regular Senior Secondary Schools	7792443	7927063	23753709
Combined Secondary Schools	2388090	2416580	7246165
Regular High Schools	5115500	5129919	15449469
12-Year Schools	288853	381564	1058075
Adult High Schools	36009		40344
Secondary Vocational Education	4872763	5570492	15552634
Regular Specialized Secondary Schools	2166660	2418344	6984205
Adult Specialized Secondary Schools	510987	462495	1131250
Vocational High Schools	1272933	1403185	4010825
Skilled Workers Schools	902993	1286468	3416354
Junior Secondary Education	13831576	16026931	46680415
Junior Secondary Schools	13677686	16026931	46525854
Regular Junior Secondary Schools	9682552	10978173	32249484
9-Year Schools	1968137	2597780	7256642
12-Year Schools	327926	457910	1262268
Combined Secondary Schools	1700160	1991459	5755420
Vocational Junior Secondary Schools	911	609	2050
Adult Junior Secondary Schools	153690		154561
Primary Education	16888395	18672970	104125004
Regular Primary Schools	16164927	18672970	103392541
Primary Schools	14168663	16439462	90986857
9-Year Schools	1798155	1999810	11140679
12-Year Schools	198109	233698	1265005
Adult Primary Schools	723468		732463
Literacy Courses	210127		229141
Correctional Work-Study Schools	2716	3235	6818
Special Education Schools	81017	123514	665942
Pre-school Education Institutions	17906336	18639134	46564204

Source: <http://www.stats.gov.cn/tjsj/ndsj/2019/indexeh.htm>

Number of School by type and level

Year	Regular HEIs	Specialized Courses	Regular	Secondary	Junior	Vocational Junior Secondary Schools	Regular	Special	Pre-school
			Senior Secondary Schools	Vocational Education	Secondary Schools		Primary Schools	Education Schools	Education Institutions
1978	598		49215	2760	113130		949323	292	163952
1980	675		31300	3459	87077		917316	292	170419
1985	1016		17318	14190	77529	1626	832309	375	172262
1990	1075		15678	20763	73462	1509	766072	746	172322
1995	1054		13991	22072	68664	1536	666685	1379	180438
2000	1041	442	14564	19727	63898	1194	563622	1539	175836
2001	1225	628	14907	17580	66590	1065	491273	1531	111706
2002	1396	767	15406	15919	65645	984	456903	1540	111752
2003	1552	908	15779	14682	64730	1019	426846	1551	116390
2004	1731	1047	15998	14454	63757	697	394183	1560	117899
2005	1792	1091	16092	14466	62486	601	366213	1593	124402
2006	1867	1147	16153	14693	60885	336	341639	1605	130495
2007	1908	1168	15681	14832	59384	275	320061	1618	129086
2008	2263	1184	15206	14847	57914	213	300854	1640	133722
2009	2305	1215	14507	14388	56320	153	280184	1672	138209
2010	2358	1246	14058	13862	54890	67	267410	1706	150420
2011	2409	1280	13688	13083	54117	54	241249	1767	166750
2012	2442	1297	13509	12654	53216	49	228585	1853	181251
2013	2491	1321	13352	12262	52804	40	213529	1933	198553
2014	2529	1327	13253	11878	52623	26	201377	2000	209881
2015	2560	1341	13240	11202	52405	22	190525	2053	223683
2016	2596	1359	13383	10893	52118	16	177533	2080	239812
2017	2631	1388	13555	10671	51894	15	167009	2107	254950
2018	2663	1418	13737	10229	51882	11	161811	2152	266677

Source: <http://www.stats.gov.cn/tjsj/nds/2019/indexe.htm>

Number of Students per 100000 Population by level

Year Region	Pre-school Education	Primary Education	Junior Secondary Education	Senior Secondary Education	Higher Education
1990	1725	10707	3425	1337	325
1995	2262	11010	3945	1610	457
2000	1782	10335	4969	2000	723
2005	1676	8358	4781	3070	1613
2006	1731	8192	4557	3321	1816
2007	1787	8037	4364	3409	1824
2008	1873	7819	4227	3463	2042
2009	2001	7684	4097	3455	2126
2010	2230	7448	3955	3504	2189
2011	2554	7403	3779	3495	2253
2012	2736	7196	3635	3411	2335
2013	2876	6913	3279	3227	2418
2014	2977	6946	3222	3100	2488
2015	3118	7005	3152	2965	2524
2016	3211	7211	3150	2887	2530
2017	3327	7300	3213	2961	2576
2018	3380	7438	3347	2828	2658
Beijing	2076	4206	1285	1151	5088
Tianjin	1689	4324	1800	1752	4150
Hebei	3154	8761	3765	2885	2457
Shaanxi	2668	6172	3073	2910	2383
Inner Mongolia	2439	5305	2517	2445	1984
Liaoning	2091	4474	2255	2195	2866
Jilin	1543	4424	2431	2078	3131
Heilongjiang	1378	3481	2462	2079	2405
Shanghai	2363	3309	1789	1982	3517
Jiangsu	3183	6980	2812	2123	3143
Zhejiang	3419	8374	2854	2581	2570
Anhui	3313	7304	3344	3065	2345
Fujian	4306	8218	3291	2669	2355
Jiangxi	3490	9113	4478	3242	2771
Shandong	3074	7255	3455	2723	2588
Henan	4582	10405	4727	3031	2653
Hubei	2949	6211	2690	2163	3088
Hunan	3283	7609	3505	2951	2610
Guangdong	4021	8849	3335	2917	3542
Guangxi	4499	9769	4353	3758	2602
Hainan	4040	8983	3810	3362	2305
Chongqing	3132	6814	3400	3268	3081
Sichuan	3142	6691	3154	2799	2409
Gansu	4328	10384	5051	4379	2254
Yunnan	2981	7905	3877	3147	2185
Tibet	3660	9684	3840	2508	1616
Shaanxi	3685	6926	2830	2894	3562
Gansu	3596	7222	3313	2964	2258
Qinghai	3590	8128	3728	3097	1425
Ningxia	3542	9625	4259	3330	2379
Xinjiang	6371	3925	3781	3631	1954

Source: <http://www.stats.gov.cn/tjsj/ndsj/2019/indexeh.htm>

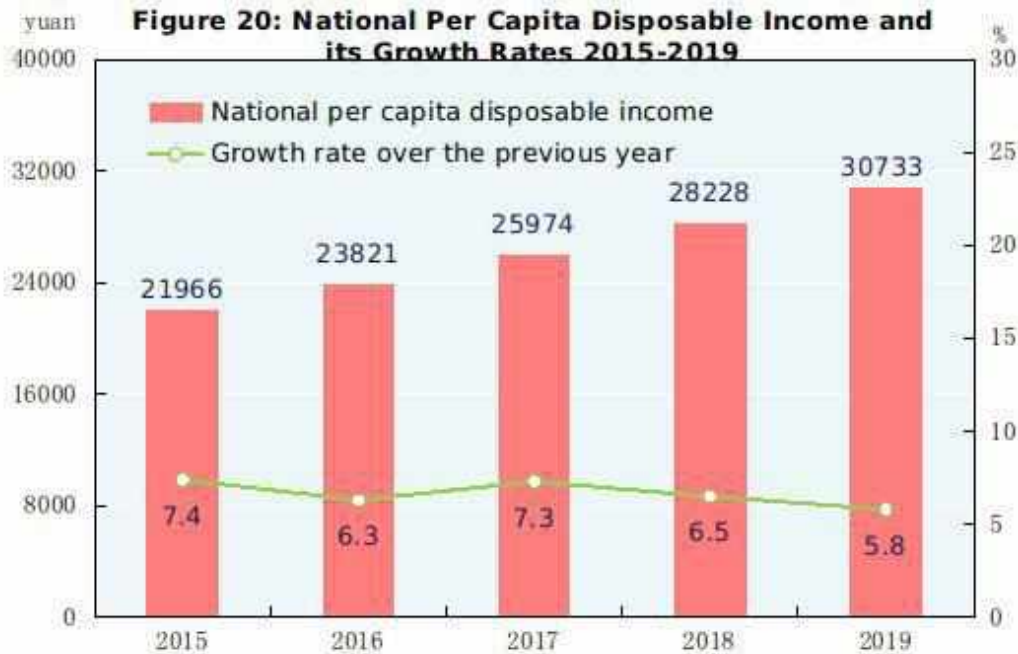
10.3 Economic Indicators (especially China's GNI.)

In a report titled "Why Is China Growing So Fast?" published by International Monetary Fund states that Economists studying China face thorny theoretical and empirical issues, mostly deriving from the country's years of central planning and strict government control of many industries, which tend to distort prices and misallocate resources. In addition, since the Chinese national accounting system differs from the systems used in most Western nations, it is difficult to derive internationally comparable data on the Chinese economy. Figures for Chinese economic growth consequently vary depending on how an analyst decides to account for them. Although commonly applied to market economies, the neoclassical model has also been used to analyse command economies. It is an appropriate first step in looking at the Chinese economy and yields useful "benchmark" estimates for future research. The framework does, however, have some limitations in the Chinese context. Original data for the new IMF research came from material released from the State Statistical Bureau of China and other government agencies. Problematically, the component statistics used to compile the Chinese gross national product (GNP) have been kept only since 1978; before that, Chinese central planners worked under the concept of gross social output (GSO), which excluded many segments of the economy counted under GNP. Fortunately, China also compiled an intermediate output series called national income, which lies somewhere between GNP and GSO and is available from 1952 to 1993. After making appropriate adjustments to the national income statistics, including adjusting for indirect business taxes, these data can be used to analyse the sources of Chinese economic growth.¹⁹⁷⁶

In "Statistical Communiqué of the People's Republic of China on the 2019 National Economic and Social Development", published by National Bureau of Statistics (2020), China states that in 2019, the per capita disposable income nationwide was 30,733 yuan, an increase of 8.9 percent over that of the previous year (2018) or a real increase of 5.8 percent after deducting price factors. The median of per capita disposable income nationwide was 26,523 yuan, up by 9.0 percent. In terms of usual residence, the per capita disposable income of urban households was 42,359 yuan, up by 7.9 percent over that of 2018, or a real growth of 5.0 percent after deducting price factors. The median of per capita disposable income of urban households was 39,244 yuan, up by 7.8 percent. The per capita disposable income of rural households was 16,021 yuan, up by 9.6 percent over that of the previous year, or 6.2 percent in real terms after deducting price factors. The median of per capita disposable income of rural households was 14,389 yuan, up by 10.1 percent. Grouped by income quintile, the per capita disposable income of low-income group reached 7,380 yuan, the lower-middle-income group 15,777 yuan, the middle-income group 25,035 yuan, the upper-middle-income group 39,230 yuan and the high-income group 76,401 yuan. The per capita monthly income of migrant workers was 3,962 yuan, increased by 6.5 percent over that of the previous year. The national per capita consumption expenditure was 21,559 yuan, up by 8.6 percent over that of the previous year (2018), or a real growth of 5.5 percent after deducting price factors. Specifically, the per capita consumption expenditure on services totaled 9,886 yuan, up by 12.6 percent over that of the previous year, accounting for 45.9 percent of the per capita consumption expenditure. In terms of usual residence, the per capita consumption expenditure of urban households was 28,063 yuan, up by 7.5 percent, or 4.6 percent in

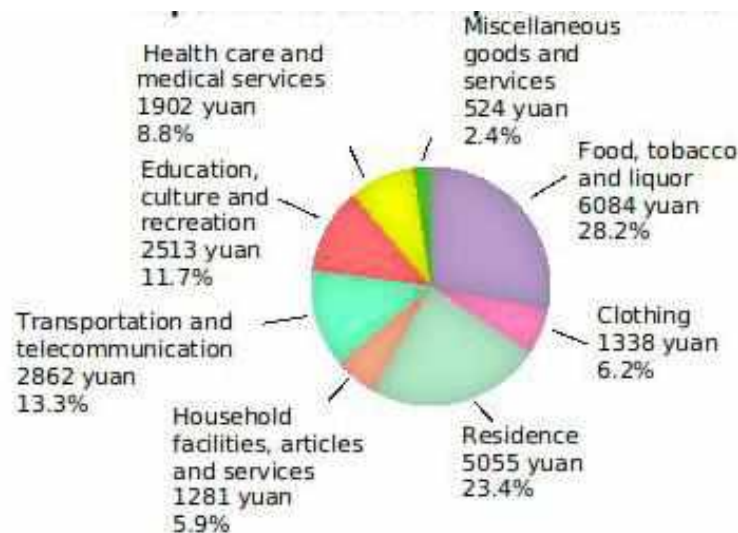
¹⁹⁷⁶ <https://www.imf.org/EXTERNAL/PUBS/FT/ISSUES8/>

real terms after deducting price factors. The per capita consumption expenditure of rural households was 13,328 yuan, up by 9.9 percent, or a real growth of 6.5 percent after deducting price factors. The national Engel's Coefficient stood at 28.2 percent, 0.2 percentage point lower than that of the previous year, with that of urban and rural households standing at 27.6 percent and 30.0 percent respectively.¹⁹⁷⁷



Source: http://www.stats.gov.cn/english/PressRelease/202002/t20200228_1728917.html

National Per Capita Consumption Expenditure and Composition in 2019

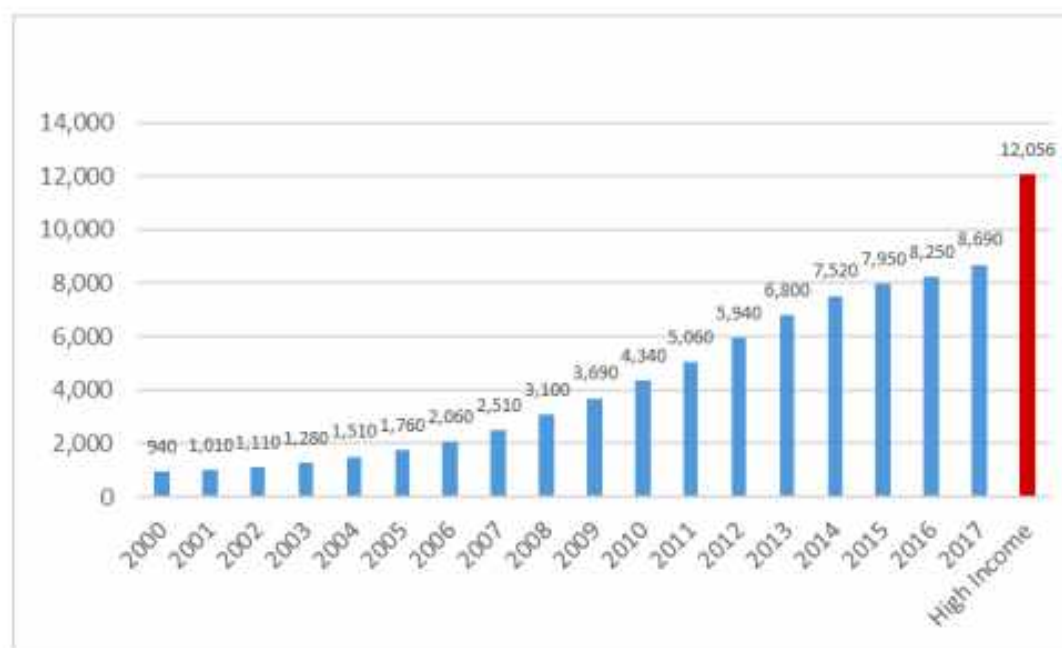


Source: http://www.stats.gov.cn/english/PressRelease/202002/t20200228_1728917.html

¹⁹⁷⁷ http://www.stats.gov.cn/english/PressRelease/202002/t20200228_1728917.html

The World Bank classifies development levels of economies using a per capita gross national income (GNI) methodology. According to the World Bank, China went from a low-income economy to a low-middle-income economy in 1997, and in 2010, it became an upper-middle-income country. China's 2017 per capita GNI (at \$8,690) was 38.7% below the level China would need to obtain to become a high-income economy. The Chinese government projects that China can cross the high-income threshold by 2025. It hopes to achieve this largely by making innovation a major source of future economic growth. Sceptics contend that innovation growth in China will be hard to achieve, especially if it is mainly state-driven and imposes new restrictions on foreign firms.¹⁹⁷⁸

World Bank Measurements of China's Per Capita GNI: 2000-2017 (\$ U.S.)



Source: World Bank.

Note: Bar in red indicates the level China would need to reach to become a high-income economy.

However, in an article titled “China's GNI higher than middle income countries” maintains that in 2018, China's per-capita gross national income (GNI) hit \$9,732, higher than that of middle income countries, according to a report released by the National Bureau of Statistics. Over the past seven decades, China's national economy maintained rapid growth, with a tangible rise in its economic aggregate, the report said. The report, which elaborates economic and social development achievement since the founding of New China 70 years ago, showed China's GDP was 67.9 billion yuan in 1952, with per-capita GDP of 119 yuan. Since the country began to implement reform and opening-up in 1978, China's economy has maintained rapid growth. In 2010, China's economic aggregate was 41.21 trillion yuan, overtaking Japan to become the second-largest economy. In 2017, China's economic aggregate reached 90.03 trillion yuan, accounting for nearly 16 percent of the global economy, while its per-capita GNI reached \$9,732, higher than the average level of middle income countries.¹⁹⁷⁹

¹⁹⁷⁸ https://www.everycrsreport.com/reports/RL33534.html#_Toc12530835

¹⁹⁷⁹ <http://www.chinadaily.com.cn/a/201907/02/WS5d1af3caa3105895c2e7b2d2.html>

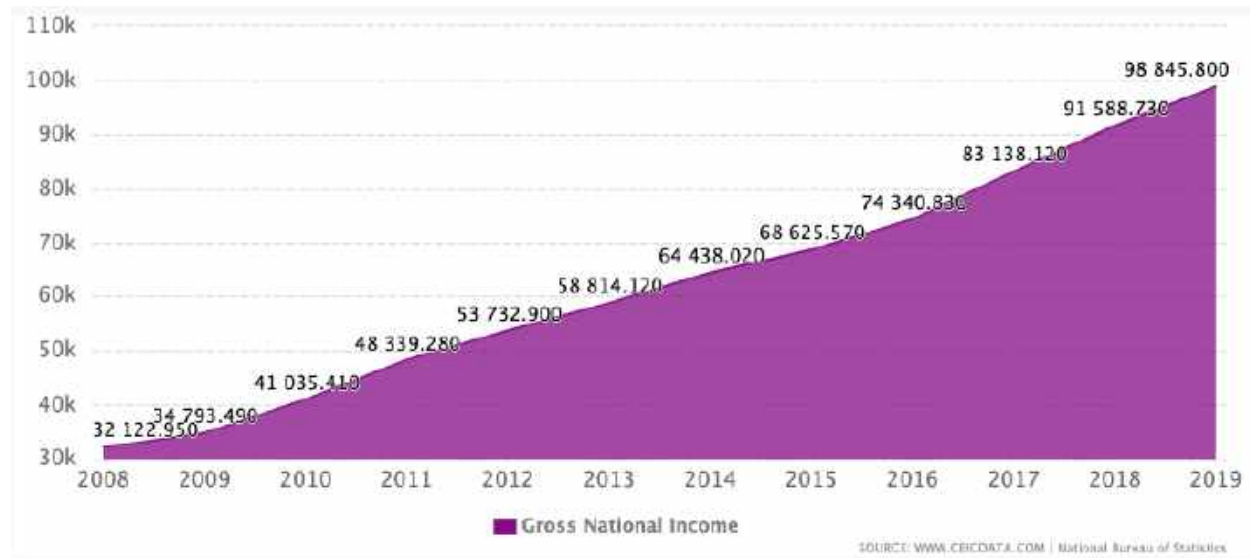
China's financial strength has also improved greatly, with big increase in foreign reserves. In 1950, China's fiscal revenue was only 6.2 billion yuan, and the figure rose to 113.2 billion yuan in 1978. Since the country began its reform and opening-up, China has seen a surge in fiscal revenue. In 1999, China's national fiscal revenue exceeded 1 trillion yuan for the first time, and reached 11.72 trillion yuan in 2012, and 18.34 trillion yuan in 2018. Between 1951 and 2018, China registered an average annual growth of 12.5 percent in fiscal revenue, providing strong capital guarantee to promote economic development and improve people's livelihood.⁴⁴

Since the reform and opening-up, China's foreign exchange reserves have showed stable growth. As of 1978, the figure stood at \$167 million, ranked 38th in the world. By the end of 2006, China's foreign reserves surpassed \$1 trillion and become the world's largest. The figure was \$3.07 trillion as of the end of last year, ranking at the top worldwide for 13 consecutive years. Industrial structure continued optimization and upgrade over the past 70 years. At the early stage of the founding of the country, China's agricultural production has weak bases, with lower grain output. Since the reform and opening-up, the agricultural economy witnessed rapid development. In 2012, China's total grain output rose to 612.23 million tons from 304.77 million tons in 1978, while the total output value of agriculture, forestry, animal husbandry and fishery increased to 8.63 trillion yuan from 139.7 billion yuan. Meanwhile, China's industrial system gradually improved, with several industrial products' production ranking first in the world. The founding of New China marked the launch of industrialization, and China's industrial development entered the take-off period after the reform and opening-up. Between 2013 and 2018, the added value of high technology industry and equipment manufacturing industry registered average annual growth of 11.7 percent and 9.5 percent, respectively. Compared with 1949, China's raw coal production increased by 114-fold to 3.68 billion tons last year, while steel production rose by 8,503-fold to 1.11 billion tons.

The electronic information industry emerged and experienced rapid development. In 2018, the output of mobile communication handset and microcomputer equipment reached 1.8 billion and 310 million units, respectively. The burgeoning service industry continually meets the needs of production and people's life, the report said. Last year, the added value of the tertiary industry stood at 46.96 trillion yuan, more than 51 times the number in 1978, with average annual growth of 10.4 percent. The transportation industry, wholesale and retail, real estate sector and financial industry registered an average annual growth of 9 percent, 10.1 percent, 10.3 percent and 12 percent, respectively, in added value. The industrial structure has continued optimization. At the early stage of the founding of the country, agriculture had a higher proportion in the national economy, while industry and service were relatively weak. In 1952, China's primary, secondary and tertiary industries respectively accounted for 50.5 percent, 20.8 percent and 28.7 percent of the GDP. In 1978, the proportions changed to a respective 27.7 percent, 47.7 percent and 24.6 percent. Since reform and opening-up, China has experienced rapid development in industrialization and urbanization. In 2012, the tertiary industry's proportion reached 45.5 percent, surpassing the secondary industry for the first time and becoming the largest industry for the national economy. Last year,

contributions to the GDP from the primary, secondary and tertiary industries respectively reached 7.2 percent, 40.7 percent and 52.2 percent.¹⁹⁸⁰

China's Gross National Income data was reported at 98,845.800 RMB bn in Dec 2019. This records an increase from the previous number of 91,588.730 RMB bn for Dec 2018. China's Gross National Income data is updated yearly, averaging 974.950 RMB bn from Dec 1952 to 2019, with 68 observations. The data reached an all-time high of 98,845.800 RMB bn in 2019 and a record low of 67.910 RMB bn in 1952. China's Gross National Income data remains active status in CEIC and is reported by National Bureau of Statistics.¹⁹⁸¹



¹⁹⁸⁰ <http://www.chinadaily.com.cn/a/201907/02/WS5d1af3caa3105895c2e7b2d2.html>

¹⁹⁸¹ <https://www.ceicdata.com/en/china/gross-domestic-product/gross-national-income>