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China in the World Economy: 1300-2030

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ABSTRACT

In the fourteenth century, China was the lead country in terms of per capita income and maritime technology. Early in the Ming dynasty, it turned its back on the world economy. By the sixteenth century, Western Europe had overtaken China in per capita income, technology and scientific knowledge, but China's bureaucratic elite was ethnocentric and indifferent to developments outside China. Between 1820 and 1950, per capita income fell from 90 per cent to 20 per cent of the world average due mainly to civil wars and the intrusions of foreign colonialists. 1949 brought a sharp change in the political regime which was a successful defender of China's national integrity, but operated with minimal links to the world economy. After 1978, pragmatic reforms brought a massive increase in interaction with the world economy, and a great acceleration of economic growth. It seems highly likely that by 2030, China will be the world's biggest economy

JEL Classification: N15, F0

Keywords: China; Economic growth; Lead country

I. CHARACTERISTICS OF TRADITIONAL CHINA

In world perspective China's performance has been exceptional. In 1300, it was the world's leading economy in terms of per capita income. It outperformed Europe in levels of technology, the intensity with which it used its natural resources, and capacity for administering a huge territorial empire. By 1500, western Europe had overtaken China in per capita real income, technological and scientific capacity. From the 1840s to the middle of the twentieth century, China's performance actually declined in a world where economic progress elsewhere was very substantial. In the past quarter-century, China has had a rapid growth trajectory-a process of catch-up which seems likely to continue well into the present century. By 2030 Chinese per capita income will probably be above the world average, and it will again be the world's biggest economy as it was from 1300 to 1890.

China was a pioneer in bureaucratic governance. In the tenth century, it was already administered by professionally trained public servants, recruited by examination on a meritocratic basis. The bureaucracy, schooled in the Confucian classics, was the main instrument for imposing social and political order in a unitary state over a huge area. It had no challenge from a landed aristocracy, an established church, a judiciary, dissident intellectuals, or an urban bourgeoisie, and only rarely from the military. They used a written language common to all of China, and the official Confucian ideology was deeply ingrained. This system was relatively efficient and cheap to operate compared with the multilayered structure of governance in pre–modern Europe and Japan. In Tokugawa Japan, the shogunal, daimyo and samurai households were about 6.5 per cent of the population compared with 2 per cent for the bureaucracy, military and gentry in China. Fiscal levies accounted for 5 per cent of GDP in China compared with 25 per cent in Japan, though the Chinese gentry also had rental incomes and the bureaucracy had substantial income from non-fiscal exactions

In the West, recruitment of professionally trained public servants on a meritocratic basis was initiated by Napoleon, a millennium later, but European bureaucrats never had the social status and power of the Chinese literati. Within each European country power was fragmented between a much greater variety of countervailing forces. Europe had a system of nation-states in close propinquity. They were outward looking, had significant trading relations and relatively easy intellectual interchange. This benign fragmentation stimulated competition and innovation to a degree not possible in China.

The economic impact of the Chinese bureaucracy was very positive for agriculture. Like the Physiocrats, they thought it was the key sector from which they could squeeze a surplus in the form of taxes and compulsory levies. They nurtured it with hydraulic works. Thanks to the precocious development of printing (500 years before Europe) they were able to diffuse best-practice techniques by widespread distribution of illustrated agricultural handbooks. They settled farmers in promising new regions. They developed a public granary system to mitigate famines. They fostered innovation by introducing early ripening seeds which eventually permitted double or triple cropping. They promoted the introduction of new crops-tea in the Tang

dynasty, cotton in the Sung, sorghum in the Yuan, new world crops such as maize, potatoes, sweet potatoes, peanuts and tobacco in the Ming.

Land shortage was compensated by intensive use of labour, irrigation and natural fertilisers. Land was under continuous cultivation, without fallow. The need for fodder crops and grazing land was minimal. Livestock was concentrated on scavengers (pigs and poultry). Beef, milk and wool consumption were rare. The protein supply was augmented by widespread practice of small scale aquaculture. Higher land productivity permitted denser settlement, reduced the cost of transport, raised the proportion of farm output which could be marketed, released labour for rural handicraft activity, particularly the spinning and weaving of cotton, which provided more comfortable, more easily washable, and healthier clothing.

Between the eighth and the thirteenth centuries there was a major shift in the centre of gravity of the economy. In the eighth century three-quarters of the population lived in North China, where the main crops were wheat and millet. By the end of the thirteenth, three-quarters lived south of the Yangtse. This area had been swampy and lightly-settled, but with irrigation and early ripening seeds, it provided an ideal opportunity for massive development of rice cultivation, and an increase in per capita income by a third. Thereafter, from the thirteenth to the beginning of the nineteenth century, China was able to accommodate a fourfold increase in population whilst maintaining average per capita income more or less stable. Its capacity for extensive growth was most clearly demonstrated in the eighteenth century. Its GDP grew faster than that of western Europe from 1700 to 1820, even though European per capita income grew by a fifth.

Outside agriculture the bureaucratic system had negative effects. The bureaucracy and the associated gentry were quintessential rent-seekers. They prevented the emergence of an independent commercial and industrial bourgeoisie on the European pattern. Entrepreneurial activity was insecure in a framework where legal protection for private activity was exiguous. Any activity that promised to be lucrative was subject to bureaucratic squeeze. Larger undertakings were limited to state or publicly licensed monopolies.

The most striking example of the adverse effect of bureaucratic regulation was the virtual closure of China to international trade early in the fifteenth century, and the subsequent disappearance of its sophisticated shipbuilding industry.

The Sung dynasty (960-1279) had fostered the growth of ports and foreign trade and created China's first navy. The Yuan dynasty (1279-1368) enlarged shipbuilding for grain transport to Peking, for maritime commerce with Asia and for naval operations. They reopened overland commerce to Europe and the Middle East on the silk route. In the early years of the Ming dynasty (1368-1644), China embarked on a series of naval expeditions which penetrated very far into the "Western Oceans". They were commanded by Admiral Cheng-ho, a eunuch who was a close associate of the Yung-lo emperor. The idea was to develop and create tributary relationships but private trade was prohibited. The navy had 2,700 patrol vessels and combat ships, 400 large warships, 400 grain transport freighters, and nearly 300 very large "treasure-ships" for expeditions to the Western Oceans. The latter were five times as big as any of the ships of Vasco da Gama, the Portuguese admiral

Table 1

GDP of Asian countries, 1500-2003

(million 1990 international $)

	1500	1700	1820	1950	2003
China	61,800	82,800	228,600	239,903	5,659,200
Japan	7,700	15,390	20,739	160,966	2,699,261
India	60,500	90,750	111,417	222,222	2,267,136
Bangladesh & Pakistan				49,994	430,704
Indonesia	6,046	7,598	10,970	66,358	762,545
South Korea	3,282	5,005	5,637	16,045	758,415
North Korea	1,518	2,315	2,607	7,293	25,310
Other East Asia	10,142	13,721	17,450	114,673	1,619,288
Total East Asia	**150,822**	**217,380**	**397,420**	**877,454**	**14,257,432**
Arabia	2,475	2,475	2,861	19,583	352,894
Iran	2,400	3,000	3,857	28,128	349,873
Iraq	550	550	643	7,041	25,256
Turkey	3,780	5,040	6,478	34,279	458,454
Other West Asia	1,290	1,226	1,430	17,252	284,150
Total West Asia	**10,495**	**12,291**	**15,269**	**106,283**	**1,470,627**
Total Asia	**161,317**	**229,671**	**412,689**	**983,737**	**16,002,724**
W. Europe	**44,192**	**81,302**	**160,145**	**1,396,188**	**7,741,127**
USA	**800**	**527**	**12,548**	**1,455,916**	**8,435,588**

Source Maddison (2001 and 2003) updated.

Table 2

Chinese naval diplomacy: voyages to the "western" and "eastern" oceans, 1405–33

Date	Number of Ships	Number of Naval Military & Other Personnel	Places Visited in Western Oceans	Places Visited in Eastern Oceans
1405–7	62 large, 255 small	27,000	Calicut	Champa, Java, Sumatra
1407–9	small number	n.a.	Calicut & Cochin	Siam, Sumatra, Java
1409–11	48	30,000	Malacca, Quilon	Sumatra
1413–15	63	29,000	Hormuz, Red Sea, Maldives, Bengal	Champa, Java,Sumatra
1417–19	n.a.	n.a.	Hormuz, Aden, Mogadishu, Malindi	Java, the Ryuku islands, Brunei
1421–2	41	n.a.	Aden, East Africa	Sumatra
1431–33	100	27,500	Ceylon, Calicut, Aden, Hormuz, Jedda, Malindi	Vietnam, Sumatra, Java, Malacca

Source: Needham (1971) and Levathes (1994). The detailed official records of these trips were destroyed by the bureaucracy who were opposed to renewal of such expeditions. The evidence is based on the writings of participants and later imperial histories

who inaugurated European trade with Asia by sailing round Africa at the end of the 15th century. China turned its back on the world economy earlier in the same century, when its maritime technology was superior to that of Europe. During large parts of the Ming and Ch'ing dynasties, it virtually cut itself off from foreign commerce.

The major security concern was defence against potential invasions from Mongolia or Manchuria and to guarantee the food supply to Beijing. The Grand Canal was reopened to its full length in 1415, functioning better than ever before because of new locks which made it operational on a full–time basis. Grain shipments by sea to the capital were replaced by canal barges, treasure ships disappeared, coastal defences were reduced. Most of the shipyards were closed, and naval manpower was reduced by retrenchment and desertions. The tributary arrangements for countries within the Eastern Ocean (Burma, Nepal, Siam Indochina, Korea, and the Ryukyus) continued, but the ban on private trade continued, and sea-going junks with more than two masts were prohibited. This regime sparked large scale development of illicit private trade and piracy. The main beneficiaries were Chinese and Japanese pirates, and the Portuguese who were allowed to establish a base in Macao in 1557, which they kept until 1999. In the seventeenth century the Dutch tried unsuccessfully to dislodge the Portuguese from Macao, and were expelled from Taiwan in 1661.

II. CHINESE DISDAIN OF THE WEST AND ITS CONSEQUENCES

China failed to react adequately to the Western technological challenge until the middle of the twentieth century, mainly because the ideology, mindset and education system of the bureaucracy promoted an ethnocentric outlook, indifferent to developments outside China. There were Jesuit scholars in Peking for nearly two centuries; some of them like Ricci, Schall and Verbiest had intimate contact with ruling circles, but there was little curiosity amongst the Chinese elite about intellectual or scientific development in the West. In 1792–93, Lord Macartney spent a year carting 600 cases of presents from George III. They included a planetarium, globes, mathematical instruments, chronometers, telescopes, measuring instruments, plate glass, copperware and other miscellaneous items. After he presented them to the Ch'ien–lung Emperor, the official response was: "there is nothing we lack.... We have never set much store on strange or ingenious objects, nor do we need any more of your country's manufactures". These deeply engrained mental attitudes helped prevent China from emulating the West's protocapitalist development from 1500 to 1800, and from participation in much more dynamic processes of economic growth thereafter. It did not start establishing emdassies or legations abroad until 1877.

Between 1820 and 1950, the world economy made enormous progress by any previous yardstick. World product rose eightfold, and world per capita income 2.6 fold. US per capita income rose eightfold, European income fourfold and Japanese threefold. In other Asian countries except Japan, economic progress was very modest but in China per capita product actually fell. China's share of world GDP fell from a third to one twentieth. Its real per capita income fell from 90 to 20 per cent of the world average. Most Asian countries had problems similar to those of China, i.e.indigenous

institutions which hindered modernisation, and foreign colonial intrusion. But these problems were worse in China, and help to explain why its performance was exceptionally disappointing.

III. INTERNAL FORCES UNDERMINING THE MANCHU REGIME

Chinese development was interrupted by internal causes and by foreign intrusion. Internal disorder took a heavy toll on population and economic welfare (see Table 3). The Taiping rebellion (1850-64) affected more than half of China's provinces and did extensive damage to its richest areas. In the five provinces most affected, population in the early 1890s was 50 million lower than it had been 70 years earlier. Parts of the same area bore the main brunt of the Yellow river floods in 1855. Due to governmental neglect of irrigation works it burst its banks and caused widespread devastation in Anhwei and Kiangsu. It had previously flowed to the sea through the lower course of the Huai river, but after 1855, it flowed from Kaifeng to the Shantung peninsula, more than 400 km north of its previous channel. There were Muslim rebellions in Shensi, Kansu and Sinkiang, where population fell due to brutal repression in the 1860s and 1870s. In the Republican era there were two decades (1927-1949) of civil war between the Kuo Ming Tang (KMT) forces of Chiang Kai Shek and the communists led by Mao Tse Tung.

Table 3
China's population by province, 1819-1953
(million)

	1819	**1893**	**1953**
Provinces most affected by Taiping rebellion[a]	153.9	101.8	145.3
Provinces affected by Muslim rebellions[b]	41.3	26.8	43.1
Ten Other Provinces of China Proper[c]	175.6	240.9	338.6
Three Manchurian Provinces[d]	2.0	5.4	41.7
Sinkiang, Mongolia, Tibet, Ningsia, Tsinghai	6.4	11.8	14.0
Total	379.4	386.7	582.7

a. Anhwei, Chekiang, Hupei, Kiangsi, Kiangsu;
b. Kansu, Shensi, Shansi;
c. Fukien, Honan, Hopei, Hunan, Kwangsi, Kwangtung, Kweichow, Shantung, Szechwan and Yunnan;
d. Heilungkiang, Kirin, Liaoning.
Source: Maddison (1998), p. 47.

IV. THE IMPACT OF COLONIAL INTRUSIONS

Colonial penetration began with the capture of Hong Kong by British gunboats in 1842. The immediate motive was to guarantee free access to Canton to exchange Indian opium for Chinese tea. A second Anglo-French attack in 1858-60 destroyed the summer palace of the Emperor in Peking. The subsequent treaty opened access to the

interior of China via the Yangtse and the huge network of internal waterways which debouched at Shanghai.

This was the era of free trade imperialism. Western traders were individual firms, not monopoly companies. In sharp contrast to their hostile and mutually exclusive trade regimes in the merchant capitalist epoch, the British and French had made their Cobden-Chevalier Treaty to open European commerce on a most-favoured-nation basis. They applied the same principle in the treaties imposed on China. Hence twelve other European countries, Japan, the USA, and three Latin American countries acquired the same trading privileges before the first world war.

The treaties forced China to maintain low tariffs. They legalised the opium trade and gave foreigners extra-territorial rights and consular jurisdiction in 92 "treaty ports" opened between 1842 and 1917. Some of these "ports" were far inland, e.g. Harbin in the middle of Manchuria, and Chungking 1,400 km. up the Yangtse. There were also six territories "leased" to Britain, France, Germany, Japan and Russia. To monitor the Chinese commitment to low tariffs, a Maritime Customs Inspectorate was created (with Sir Robert Hart as Inspector General from 1861 to 1908) to collect tariff revenue for the Chinese government. A large part of this was earmarked to pay the "indemnities" which the colonialists demanded to defray the costs of their attacks on China. The treaty port system was not terminated until 1943.

In addition to these "port" arrangements, China also suffered large territorial losses and the dismantlement of its network of tributary states. In 1860, 82 million hectares of land and a huge stretch of Pacific coast were ceded to Russia, where it constructed its new port, Vladivostok. In the 1860s, the khanates of Tashkent, Bokhara, Samarkand, Khiva and Khokand became part of the Russian empire. In 1882, the Ryukus were lost to Japan. In 1885, Indochina was ceded to French suzerainty and in 1886 Burma to British. In 1895, Taiwan was lost to Japan which also got suzerainty over Korea. In 1915, Russia gained suzerainty over Outer Mongolia and Britain over Tibet. In 1931-3, Japan took over China's Manchurian provinces and Jehol to create its puppet state of Manchukuo. The Manchu reaction to these intrusions was feeble and ineffective, and serious Chinese resistance did not start until the Japanese attack in 1937.

The centre of this multilateral colonial regime was the international settlement in Shanghai. The British picked the first site in 1843 north of the "native city". The French, Germans, Italians, Japanese and Americans had neighbouring sites along the Whangpoo river opposite Pudong, with extensive grounds for company headquarters, the cricket club, country clubs, tennis clubs, swimming pools, the race course, the golf club, movie theatres, churches, schools, hotels, hospitals, cabarets, brothels, bars, consulates and police stations of the colonial powers. There were similar facilities, on a smaller scale, in Tientsin and Hankow. Most of the Chinese allowed into these segregated settlements were servants..

Foreigners were the main beneficiaries of this brand of free trade imperialism and extra-territorial privilege. The treaty ports were glittering islands of modernity, but the character of other Chinese cities did not improve, and those which had been

damaged by the massive Taiping rebellion of 1850-64 had deteriorated. Chinese agriculture was not significantly affected by the opening of the economy.

The continued expansion in treaty port facilities and the freedom which foreigners obtained in 1895 to manufacture in China contributed substantially to the growth of the modern sector, including railways, banking, commerce, industrial production and mining. There was also an associated growth of Chinese capitalist activity, which had its origins mainly in the *compradore* middlemen in the Treaty ports. There was an inflow of capital from overseas Chinese who had emigrated in substantial numbers to other parts of Asia.

The share of exports in Chinese GDP was small (0.7 per cent of GDP in 1870, 1.2 per cent in 1913)-much smaller than in India, Indonesia and Japan. China regained its tariff autonomy in 1928 and there was some relaxation of other constraints on its sovereignty in the treaty ports. In the first half of the twentieth century, China ran a significant trade deficit, quite unlike the situation in India and Indonesia which had large surpluses. Remittance from some of the 9 million overseas Chinese to their families in China covered part of the deficit and there was a large outflow of silver in the 1930s following the US devaluation in 1932 and China's switch from a silver to a paper currency in 1935.

From the 1860s onwards, the most dynamic areas in the Chinese economy were Shanghai and Manchuria..

Shanghai rose to prominence because of its location at the mouth of a huge system of waterways. "The total of inland waterways navigable by junks in nearly all seasons was nearly 30,000 miles. To this must be added an estimated half million miles of canals or artificial waterways in the delta area. It is not surprising therefore that between 1865 and 1936, Shanghai handled 45 to 65 per cent of China's foreign trade" (Eckstein, Galenson and Liu (1968), pp.60–61). It was already an important coastal port in the Ch'ing dynasty with a population of 230,000 in the 1840s. By 1938 this had risen to 3.6 million and Shanghai was the biggest city in China. It now has a population of 16 million.

Manchuria had been closed to ethnic Chinese settlement by the Manchu dynasty until 1860. They became interested in promoting Han Chinese settlement after they had been forced to cede the very thinly settled territory north of the Amur river to Russia. Between 1860 and 1930 its population grew tenfold (from 3.3 to 31.3 million) and there was substantial Russian investment in railways. Manchuria slipped from Chinese control after the Ch'ing regime collapsed in 1911. In the 1920's it was ruled by the warlord Chang Tso-lin, a Japanese crony. After his assassination, Japan's Kwantung army captured the Manchurian capital at Mukden, and extended their control to the whole of Manchuria. In 1932 Japan set up a puppet state in Manchuria, adding the Inner Mongolian province of Jehol in 1933. In 1934 the former Chinese emperor, Pu-yi was installed as emperor of Manchukuo, but the real power was exercised by the commander of the Japanese Kwantung army (300,000 strong). The Chinese government persuaded the League of Nations to condemn this action. Japan left the League, but no sanctions were imposed. In 1935, the USSR (which since 1916 had an

alternative rail link to Vladivostok north of the Amur river) sold its Chinese Eastern Railway to Japan, and moved out of Manchukuo.

Japan made major investments in Manchurian coal, metalliferous mining and manufacturing in the 1930s. Value added in modern manufacturing more than quadrupled between 1929 and 1941: in mining it trebled. By 1945, Manchuria was producing about half of modern manufacturing in China. GDP growth averaged 4.1 per cent a year from 1924 to 1941. Agriculture, forestry and fishery represented only about a third of Manchurian GDP. In 1945 there were more than a million Japanese civilians in Manchukuo.

V. ECONOMIC PERFORMANCE IN THE MAOIST PERIOD, 1949-78

The establishment of the People's Republic marked a sharp change in China's political elite and mode of governance. The degree of central control was much greater than under the Ch'ing dynasty or the KMT. It reached to the lowest levels of government, to the workplace, to farms, and to households. The party was highly disciplined and maintained detailed oversight of the regular bureaucratic apparatus. The military were tightly integrated into the system. Propaganda for government policy and ideology was diffused through mass movements under party control. Landlords, national and foreign capitalist interests were eliminated by expropriation of private property. China became a command economy on the Soviet pattern. After a century of surrender or submission to foreign incursions and aggression, the new regime was a ferocious and successful defender of China's national integrity, willing to operate with minimal links to the world economy. For most of the Maoist period there was little contact with the outside world. From 1952 to 1973 the United States applied a comprehensive embargo on trade, travel and financial transactions, and from 1960 onwards the USSR did the same.

In the Maoist era, these political changes had substantial costs which reduced the returns on China's development effort. Its version of communism involved risky experimentation on a grand scale. Self–inflicted wounds brought the economic and political system close to collapse during the Great Leap Forward (1958–60), and again in the Cultural Revolution (1966–76) when education and the political system were deeply shaken. Allocation of resources was extremely inefficient. China grew more slowly than other communist economies and somewhat less than the world average. Nevertheless, economic performance was a great improvement over the past. GDP trebled, per capita real product rose by more than 80 per cent and labour productivity by 60 per cent from 1952 to 1978. The economic structure was transformed. In 1952, industry's share of GDP was one sixth of that in agriculture. By 1978, it was bigger than the agricultural. China achieved this in spite of its political and economic isolation, hostile relations with both the United States and the Soviet Union, and wars with South Korea and India.

VI. THE REFORM PERIOD SINCE 1978

After 1978, there was a major political shift to pragmatic reformism which relaxed central political control and modified the economic system profoundly. These changes brought a more stable path of development and a great acceleration of economic growth. The only country in Asia which did better was South Korea. The growth acceleration was mainly due to increased efficiency. Collective agriculture was abandoned and production decisions reverted to individual peasant households. Small scale industrial and service activities were freed from government controls and their performance greatly outpaced that of the state sector. Exposure to foreign trade and investment were greatly enhanced. This strengthened market forces and introduced consumers to a wide variety of new goods.

The new Chinese policies were indigenously generated and quite out of keeping with the prescriptions for "transition" which were proffered and pursued by the USSR. The contrast between Chinese and Soviet performance in the reform period is particularly striking. As China prospered, the Soviet economy collapsed and the USSR disintegrated. Its per capita GDP is still lower than its 1989 peak. In 1978 Chinese per capita income was 15 per cent of that of the former Soviet Union. In 2003 it was 75 per cent of its level.

The reform period was one of much reduced international tension. China's geopolitical standing, stature and leverage were greatly increased. China became the world's second largest economy, overtaking Japan by a respectable margin and the former USSR by a very large margin. China took back Hong Kong and Macao peacefully, and inaugurated a "two systems" policy designed to attract Taiwan back into the national fold.

The rigid monopoly of foreign trade and the policy of autarkic self–reliance were abandoned after 1978. Foreign trade decisions were decentralised. The yuan was devalued and China became highly competitive. Special enterprise zones were created as free trade areas. In response to the greater role for market forces, competition emerged, resource allocation improved, and consumer satisfaction increased. There was a massive increase in interaction with the world economy through trade, inflows of direct investment, and a very large increase in opportunities for study and travel abroad, and for foreigners to visit China. The stock of foreign direct investment in 1998 was bigger than that of any other country except the USA and UK. At the same time, China has been prudent in retaining control over the more volatile types of international capital movement. Although it had to wait 15 years to be admitted to the World Trade Organisation, it is now the world's third largest exporter.

VI. THE OUTLOOK

China still has important problems to solve. The degree of regional inequality is very large, with average household income nearly eight times as high in Shanghai as in Guizhou, the poorest province. The big rural-urban differentials in income, education, health and employment opportunity are major cause of discontent.

Box 1

China's emergence from international isolation, 1949–2001

1949 Oct	People's Republic of China created. Diplomatic recognition by Burma, India and communist countries in 1949, by Afghanistan, Denmark, Finland, Israel, Norway, Pakistan, and the United Kingdom in 1950.
1950 Feb	USSR agreed to provide financial and technical assistance-eventually $1.4 billion in loans and 10,000 technicians. China acknowledged the independence of Outer Mongolia, agreed to joint Soviet–Chinese operation of Manchurian railways, Soviet military bases in Port Arthur and Dairen, and Soviet mining enterprises in Sinkiang.
1950 June 25	North Korea invaded South, penetrating deeply to Pusan.
1950 June 27	US changed its neutral line on Taiwan, sent in 7th Fleet.
1950 Oct	China sent "volunteers" (eventually 700,000) to N. Korea to push back UN forces advancing towards the Chinese border on Yalu River.
1950–l	China took back Tibet.
1953 July	Korean armistice.
1954	India ceded former British extraterritorial claims to Tibet.
1958	China menaced Taiwan in Quemoy and Matsu incidents. Khrushchev retracted offer of atomic aid.
1959	Revolt in Tibet, Delai Lama fled to India.
1960	USSR withdrew Soviet experts, abandoned unfinished projects.
1962	Border clash with India over Aksai–chin road from Sinkiang to Tibet.
1964	First Chinese atom bomb test, 1969 first hydrogen bomb test.
1963–69	Border clashes with USSR in Manchuria. China questioned legitimacy of Soviet/Chinese boundaries in Manchuria and Sinkiang.
1971 April	US lifted trade embargo on China.
1971 Oct	China entered the United Nations, Taiwan ousted.
1972 Feb	President Nixon visited China.
1972 Sep	Visit of Prime Minister Tanaka normalised diplomatic relations with Japan.
1973	US and China established *de facto* diplomatic relations.
1978 Dec	US established formal diplomatic relations, derecognised Taiwan.
1979 Feb–Mar	Border war with Vietnam after expulsion of ethnic Chinese and Vietnamese destruction of Khmer Rouge regime in Cambodia.
1980	China became a member of the World Bank and IMF, 1986 entered Asian Development Bank.
1997	Hong Kong restored to China; 1999, Macao restored to China
2001	China admitted to the World Trade Organisation

Source: *Cambridge History of China,* Vols. 14 and 15.

Table 4
Value of asian and western merchandise exports at constant prices, 1870-2003
(million 1990 dollars)

	1870	1913	1929	1950	1973	2003
Japan	51	1,684	4,343	3,538	95,105	402,861
China	1,398	4,197	6,262	6,339	11,679	453,734
India	3,466	9,480	8,209	5,489	9,679	86,097
Indonesia	172	989	2,609	2,254	9,605	70,320
S. Korea	6	171	1,292	112	7,894	299,578
Philippines	55	180	678	697	2,608	27,892
Taiwan	7	70	261	180	5,761	134,884
Thailand	88	495	640	1,148	3,081	72,233
Total	**5,243**	**17,266**	**24,294**	**19,757**	**145,412**	**1,547,589**
France	3,512	11,292	16,600	16,848	104,161	404,077
Germany	6,761	38,200	35,068	13,179	194,171	785,035
UK	12,237	39,348	31,990	39,348	94,670	321,021
USA	2,495	19,196	30,368	43,114	174,548	801,784
Total	**25,005**	**108,036**	**114,026**	**112,489**	**567,550**	**2,311,917**

Source: Maddison (2001), p. 361 for 1870-1973, Japan and western countries updated from OECD *Economic Outlook* (2002) to 2001, thereafter from IMF, *International Financial Statistics*, other Asian countries from ADB, *Key Indicators* (2005). Taiwan 1870-1913 from Ho (1978), pp. 379-380; Korea 1900-1913 from Maddison (1989), p. 140, 1870-1900 volume movement assumed to be the same as for Japan.Hong Kong exports in 1990 dollars were $240,813 million in 2003, and $10,379 million in 1973.

Table 5
Comparative dynamics of income and export performance, 1950-2003
(annual average compound growth rate)

	Per Capita GDP			Export Volume		
	1950-73	1973-90	1990-2003	1950-73	1973-90	1990-2003
Japan	8.1	3.0	0.9	15.3	6.7	2.6
China	**2.9**	**4.8**	**6.8**	**2.7**	**10.3**	**16.5**
India	1.4	2.6	3.9	2.5	3.7	12.8
Indonesia	2.6	3.1	2.6	6.5	6.0	8.1
S. Korea	5.8	6.8	4.7	20.3	13.2	12.5
Philippines	2.7	0.7	1.0	5.9	6.9	10.0
Thailand	3.7	5.5	3.4	4.9	11.5	5.5
Taiwan	6.7	5.3	4.3	16.3	12.6	9.2
Hong Kong	5.2	5.5	2.1	0.6	5.5	2.1
France	4.0	1.9	1.3	8.2	4.2	5.2
Germany	5.0	1.7	1.2	12.4	4.5	5.1
UK	2.4	1.9	2.0	3.9	4.0	4.3
USA	2.5	2.0	1.7	6.3	4.9	5.6

There are still large state industrial enterprises which are a hangover from the Maoist period. Most of them make substantial losses. They are kept in operation by government subsidy and default on loans which the state banks are constrained to give them, though their relative importance has declined significantly. In 1996, the state industrial sector employed 43 million people; by 2001 this had fallen to 18 million.

Another major (and related) problem is the large volume of non–performing loans in the banking sector which is largely controlled by the state. The importance of non–performing loans is smaller than in Japan, but the state does not make efficient allocation of the large funds which it captures from savers.

However, it is difficult to be pessimistic about the prospects for an economy which has shown such dynamism in the last quarter century and where foreign investment and foreign trade have done so much to improve efficiency in resource allocation. China is still a low- income, low-productivity country by international standards and there are opportunities for rapid catch-up in this situation which are not open to more advanced economies operating nearer to the frontier of technology. Follower countries can draw upon the lead countries' fund of technology by building up their stock of human and physical capital, opening their economies to international trade and developing institutions which nurture absorptive capacity and political stability as Japan did between 1868 and the 1970s. When the catch-up countries draw closer to the lead countries their growth rate is likely to decelerate.

Table 6 provides a perspective on China's future role in the world economy and its growth prospects over the next quarter century compared with other major economies. For population, I used the projections of the United Nations Population Division. For per capita growth, I assume a sizeable slowdown from China's recent growth rate-from 6.8 to 4.5 per cent a year from 2003 to 2030 (see Figure 1). Some slowdown is warranted for several reasons. In the reform period, changes in age structure made it possible to raise the activity rate to a degree that cannot be repeated. Because of the low starting point, the average educational level of the labour force was multiplied by a factor of five from 1952 to 1995. China has suffered environmental deterioration in its push for rapid growth. In future it will have to devote greater resources to mitigate this damage. There has been a relative decline of income in rural areas and a neglect of rural educational and health facilities. Bigger resources will be needed to compensate for this. Some slowdown can also be expected as the average technological level gets closer to the frontier in the advanced countries. Technical advance will be more costly as imitation is replaced by innovation. However, it seems highly likely that China will again become the world's biggest economy (see Figure 2). The average per capita level will still be a good deal lower than in the USA, western Europe and Japan, but it would be well above the world average.

Table 6
China in the world economy, 1300-2030 AD

	China	Japan	India	W Eur	USA	World	China/World
				Population (million)			
1300	100.0	10.5	88.0	58.4	1.7	360.0	0.28
1500	103.0	15.4	110.0	57.3	2.0	438.4	0.23
1820	381.0	31.0	209.0	133.0	10.0	1,041.8	0.37
1913	437.1	51.7	303.7	261.0	97.6	1,791.1	0.24
1950	546.8	83.8	359.0	304.9	152.3	2,524.3	0.22
1973	881.9	108.7	580.0	358.8	211.9	3,916.5	0.23
2003	1,288.4	127.2	1,049.7	394.4	290.3	6,280.0	0.21
2030	1,485.0	121.0	1,409.0	380.0	358.0	8,270.0	0.18
				Per Capita GDP (1990 int.$)			
1300	600	475	500	593	400	530	1.13
1500	600	500	550	771	400	566	1.06
1820	600	669	533	1,204	1,257	667	0.90
1913	552	1,387	673	3,458	5,301	1,525	0.36
1950	439	1,921	619	4,579	9,561	2,111	0.21
1973	839	11,434	852	11,416	16,689	4,091	0.21
2003	4,392	21,218	2,160	19,638	29,054	6,453	0.68
2030	14,415	28,599	6,228	30,146	44,600	11,413	1.26
				GDP (billion 1990 int $)			
1300	60.0	5.0	44.0	34.6	0.7	190.0	0.32
1500	61.8	7.7	60.5	44.2	0.8	248.3	0.25
1820	228.6	20.7	111.4	160.1	12.5	695.3	0.33
1913	241.3	71.7	204.2	902.3	517.4	2,732.0	0.09
1950	239.9	161.0	222.2	1,396.2	1,455.9	5,330.0	0.05
1973	740.0	1,242.9	494.8	4,096.5	3,536.6	16,023.5	0.05
2003	5,659.2	2,699.0	2,267.1	7,745.4	8,435.6	40,525.3	0.14
2030	21,406.0	3,460.0	8,775.5	11,455.0	15,967.0	94,382.0	0.23

Source: 1300-2003 from Maddison (2003), updated. Population projections to 2030 derived from medium variant of UN Population Division, *World Population Prospects, 2000 Revision***,** UN, New York, 2001. Per capita projections for different parts of the world economy are a revised version of a paper in www.ggdc.net/Maddison/, "*Evidence to House of Lords Committee on Economic Affairs*". They are not the result of an econometric exercise, but are based on an analysis of changes in the momentum of growth in different parts of the world economy, and the likelihood of their continuation or change, see Maddison (2002), "The West and the Rest in the International Economic Order" in *Development is Back*, OECD, Paris.The above estimates of GDP levels are adjusted to reflect purchasing power parities in the benchmark year 1990 (see Maddison 1998, pp.149-166). In China the purchasing power of the yuan is much higher than the exchange rate. There is often significant error in comparative economic analysis because ignorance of the pitfalls of exchange rate conversion, leads to serious understatement of the level of Chinese GDP. This is true in journalism, political discourse and amongst some economists. Thus newspapers frequently refer to Japan as the world's second largest economy, though its GDP is only half the size of the Chinese.It should also be noted that official Chinese statistics exaggerate its rate of GDP growth for reasons explained in Maddison (1998), which contains a detailed re-estimation of performance up to 1995. For 1995-2003, I made the same type of downward adjustment to the official estimates of growth in real value added in industry and non-productive services.

Figure 1

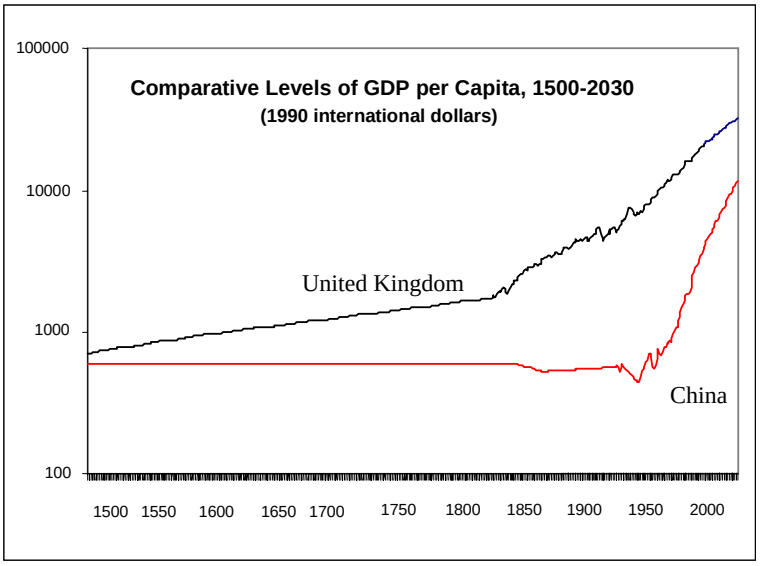
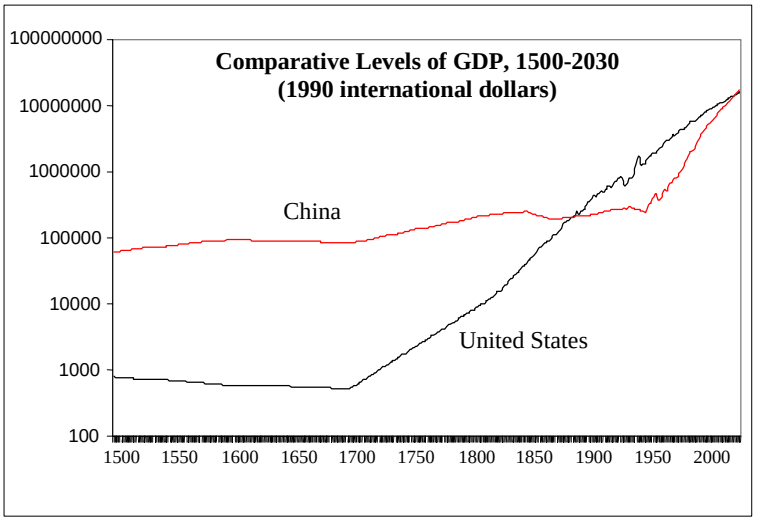


Figure 2



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