China's Rise in Historical Perspective

Ch. 5 China's Pre-Reform Economy in World Perspective

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China's thirty years of economic growth and reform beginning in 1978 did not occur in a historical vacuum. The extraordinary performance of the most recent three decades can only be understood in the context of the economic and political foundations laid both in the leftist decades immediately preceding the economic reform period and in the evolution of the Chinese economy going back as much as a millennium. This historical heritage was not all positive. In fact the two decades immediately preceding the 1978 reforms were years of pain and comparative stagnation, but pain and stagnation were nevertheless an important element in making possible the sweeping changes in the economic system that occurred after 1978. China's earlier history beginning as early as the Song dynasty (960–1279) and carrying through to the Qing dynasty (1644–1911) and the Republican period (1912–1948) did lay positive foundations for later developments, but these foundations in key respects had become calcified by the nineteenth and twentieth centuries. Much of what had been built, particularly in the political realm, had to be swept away before sustained progress was possible in the economic realm.

We will begin this chapter with a discussion of the nature of the pre-1949 Chinese economy and society. We will then move on to what occurred in the first thirty years of the People's Republic of China (PRC) from 1949 to 1978. As Barry Naughton's chapter will detail, the direction of the current reform is diametrically at odds with its past, but at the same time presupposes the context and capabilities created by its traditional heritage. Comparisons and contrasts with the rest of the world's economies will illustrate the salience of China's background.
China's premodern economy

China's political leaders achieved unity over something approximating the country's current territory as early as 221 B.C. More important, the Chinese government was able to maintain control over that very large territory for much of the next two thousand years with the notable exceptions of the 206 A.D. to 581 A.D. and 1127 A.D. to 1271 A.D. periods, and for much shorter periods at later dates. Although, as Evelyn Rawski details in chapter 3, there were frequent conflicts between the agricultural heartland and the northern nomads, there was at the same time a massive and resilient political and economic central structure. China was able to maintain unity over such a large territory largely because it developed a system of government based on a bureaucracy whose members were chosen by examination rather than by aristocratic privilege or reliance on local military power. Bureaucratic rule encouraged the spread of a common written language, a unified budget and regulatory system, and a centrally controlled military. The military force was there for putting down major challenges, but military commanders were not made governors of territories (feudal lords) as occurred in Europe and Japan. Because of the nature of the European feudal system, unity over the whole of Europe was not achieved until the formation of the European Union. Japan did not become unified for the first time until the Tokugawa leadership succeeded in bringing the various feudal han under their rule in 1603.

The relevance of this achievement to the current period in China is that China's post-1949 political leaders did not first have to create a nation-state out of a collection of disparate political entities with different cultures and languages and no sense of national identity. They did have to fight a civil war to gain control of China, but both sides in the civil war fought to gain control of all of China, not to create a separate state in one or another region of the country. The contrast is with such countries as Nigeria and the Congo and in fact much of Sub-Saharan Africa which has been torn by civil strife based on the presence of different tribes, languages, religions, and ecologies (nomad versus settled agriculture versus export crop agriculture in West Africa) within a single political entity. Within Asia, India and Pakistan became independent in 1947, and in 1971 Bangladesh split from Pakistan, and ethnic tensions remain major threats to political unity in Nepal and Sri Lanka. Indonesia, a decade after independence, had to fight a civil war for the government in Jakarta to hold on to the islands outside of Java, and its problems with Aceh have been eased only by the relief efforts following the 2004 tsunami.

In the economic sphere proper China in the millennia prior to 1949 created what by premodern standards was a sophisticated economic system. China developed a wide range of technologies in agriculture, industry, and transport. In agriculture, many of the methods of cultivation in northern dryland agriculture as early as the Tang dynasty (618–907) were similar to the methods for growing similar crops in northern Europe in the eighteenth and early nineteenth centuries. Rice cultivation was transformed in the eleventh century by the introduction of early ripening varieties of rice from Champa (part of contemporary Vietnam). After the European discovery of the Americas, crops from the Americas (corn, potatoes, peanuts) soon found their way to the Philippines and from there entered China spreading quickly (within a century) across much of the country. Farm equipment by the early Ming dynasty had reached a level of sophistication that could not easily be improved upon for Chinese conditions until the advent of modern farm machinery in the twentieth century. From the fourteenth century on Chinese population grew from around 65–80 million to over 400 million by 1850 and food production kept up with population as crop yields rose, although changes in agricultural technology other than the imported new crops were largely absent.

In industry many of the technologies developed as early as the Song dynasty in such areas as the making of steel were as sophisticated as industrial technologies not found in Europe until the eighteenth and early nineteenth centuries. As Mark Elvin argues in chapter 7, a fundamental distinction can be made between technologies that can be developed by tinkering and technologies that can only be developed after a society has developed modern science as practiced first in the West beginning in the nineteenth century. Innovations are by tinkering are developed by individuals who experiment, for example, with different kinds of increasing the efficiency of fuel use in the making of steel or with the speed with which one could spin cotton into yarn or weave yarn into cloth. Science-based innovations in Europe became central to continued technological advance in the latter half of the nineteenth century with the development of electric power and the modern chemical industry. Technologies that could be developed by tinkering had largely been developed in China centuries before the modern era. Those that required the prior development of modern science were not present in China until they were brought in from Europe in the late nineteenth century.

The general pattern of Chinese commerce, especially in the Ming and Qing dynasties, was the opposite of that of the Mediterranean West. Typically China was suspicious of private foreign commerce and did not found trading colonies, as the West had been doing since the time of Phoenicia. To be sure, there was significant trade beyond China's overland boundaries and also maritime trade, and groups of Han Chinese moved beyond the Great Wall into the northeast and by ship throughout Southeast Asia. But official contact was based on the tribute system of ritual exchange of presents rather than on com-
merce. While private commerce undoubtedly exceeded official exchanges in volume and value, it was unrecorded and viewed with disapproval by the last two dynasties. The apparent exceptions that in fact proved the rule were the famous voyages of Admiral Zheng He (seven voyages from 1405 to 1431), which were not launched to promote trade, but rather to extend and bolster the tribute system. When there were troubles controlling pirates and other seagoing entrepreneurs, Beijing did not strengthen its navy but rather attempted to close down trade altogether. Similarly, Chinese who emigrated to Southeast Asia did so illegally and were treated with suspicion when they accompanied diplomatic missions from their adopted states. Hence the common picture of traditional China as a closed and anti-commercial state.

But China's internal commerce was, in fact, well developed and extensive. Like many countries around the globe, China had rural and town markets that met periodically or continuously. But China also had a long-distance trading system that brought grain from the interior of China to the coast or from the lower Yangzi Delta to Beijing in the north and moved silk and other industrial products from the coast back into the interior. China from early on had cities with a population as large as a million people. The supply of such cities required a sophisticated domestic commercial system utilizing an extensive array of roads and canals.

An argument can be made that this level of domestic commercial development was first achieved in the Song dynasty, was followed in the Ming dynasty by a decline in long-distance commerce and in the size of cities, and then recovered in the Qing to something approximating what had been achieved earlier. Regardless of fluctuation, however, there is little question that the domestic commerce of China in certain respects matched the sophistication of that found in the West prior to the advent of the railroad. If we add to the physical infrastructure the fact that ground transport across Europe might entail crossing innumerable national boundaries, China's domestic commercial prowess is doubly impressive. The best evidence for China's strength in this regard is that when the European and American traders did come to China, they did not take over major parts of the domestic trade even though they depended on that trade to obtain the silk and tea that they shipped back to Europe and America. The domestic trade remained firmly in Chinese hands although many of these domestic merchants (compradors) worked closely with and for the foreigners. It is not that the Europeans and Americans were uninterested in the domestic trade. It was that they could not really compete outside the treaty ports for most of this business. Europeans and Americans did control and manage the export trade to Europe and in the nineteenth century the import trade into China (much of it opium) because they understood and had better access to foreign markets.

The Chinese experience with the control of domestic commerce contrasts sharply with the situation found in much of Africa and Southeast Asia. In these latter areas the local rural markets were in the hands of local merchants, but the long distance trade, both domestic and foreign, was not in local hands for the most part. Europeans dominated foreign trade as in China, but domestic trade was typically in the hands of immigrants from elsewhere who maintained their separate identity. In West Africa these traders were often Lebanese, in East Africa they were mostly 'Asians' meaning South Asians, and in colonial Southeast Asia they were mostly Chinese although in Burma they were mainly Indian.

In the financial sphere, China also developed sophisticated institutions by premodern standards. As is well known, China was the first country to use paper money on a nationwide scale. Far more important is that China developed a banking system to complement its domestic trading system. The Shanxi banks and others could transfer large sums of money over distances of hundreds or a thousand miles or more without actually having to transfer the currency itself (mainly copper coins and silvery coins or ingots). Merchants and ordinary citizens could deposit money in one place for transfer to another with confidence that the funds would actually be paid out at their destination. This system required banks that could keep books and an organizational capacity that could perform and build up trust over generations.

How do we explain the relative development of China's domestic commerce and the relative backwardness of officially encouraged international commerce? China's geographic and demographic scale is certainly important. Moreover, China's agrarian, land-bound perspective was reinforced by Confucian disparagements of merchants. One might imagine that if domestic merchants were held in high esteem they might eventually cast their gaze abroad. Also, one could argue that China's centrality in Asia affected the salience of trade. Chinese goods were more important to its neighbors than the neighbor's goods were to China, so a more cautious and defensive attitude was natural. Domestic commerce was a necessary concomitant to a prosperous China; foreign trade was not.

Partly related to the development of commerce and finance was the rise of literacy in China at least among a portion of the male population. One could not keep records and transfer instructions over long distances without some degree of literacy and numeracy skills. More generally, literacy in China was promoted by the Confucian value system. Confucius himself had made literacy an essential characteristic of anyone who aspired to be more than a farmer, and it later became built into the way in which China governed since the bureaucracy was selected on the basis of examinations that typically involved two or more decades of study of the Chinese classics. We do not have a reliable
estimate of literacy in nineteenth-century China, let alone for earlier years, but male literacy could have been as high as 50 percent. That is the figure achieved by Tokugawa Japan. Although commercial development may have been larger there, literacy played a much smaller role in the Tokugawa governing system than it did in China.

The specific things studied in premodern China were not very relevant to the requirements of a twentieth-century economy, but the existence of a substantial number of highly educated people and a much larger number of literate people was a foundation on which China could and did build. By the 1930s China had several hundred thousand graduates of modern universities with tens of thousands of those being in science and engineering. It is difficult to conceive of a country achieving this kind of educational development starting from an education base where only a few hundred people had a university-level education and the great majority of the population was illiterate. Part of the credit for China’s pre-1949 university enrollment goes to missionary-run colleges, but the case of Vietnam demonstrates that Western influence on education could be negative as well. Despite Vietnam’s high cultural regard for education, under French colonialism non-French secondary enrollment in Vietnam in 1944 was only 687 students. Much of Africa even in the early twentieth century had virtually no university graduates and illiteracy in the population at large was well over 90 percent. In the least developed parts of Sub-Saharan Africa such as Chad or Mali no more than a quarter of the population is literate even today. Literacy in most countries in Africa has expanded rapidly since independence was obtained (in the 1960s in most parts of the continent), but it takes generations to develop the kind of educational system that can support internationally top ranked universities such as Tsinghua or Beijing universities.

WHAT PREVENTED MODERN ECONOMIC GROWTH IN PREMODERN CHINA?

Given the sophistication of China’s premodern economy and society, the logical next question is to ask why China did not begin sustained rapid economic growth long before the last decades of the twentieth century? This question is sometimes put as why did Japan start modern economic growth one-half to three-quarters of a century before China? Japan in 1868 when the Meiji Restoration started was no richer than China in terms of per capita income. Both in fact were very poor with perhaps half the per capita income of Europe when Europe entered into sustained economic growth. Nor was Japan technologically more sophisticated. Its commerce and cities may have

been a larger share of its GDP and population than in China but not by any dramatic amount. Furthermore, China faced the challenge of Western imperialism earlier than Japan. China had already lost a war with the Western powers by 1842 whereas Commodore Perry’s Black Ships did not appear off the Japanese coast until 1854. It was the Western challenge that led Japan to topple the Tokugawa and restructure its government and economy beginning in 1868 but no such response occurred in China.

We will not try to explain in this chapter why Japan developed first, but there are two primary reasons why China was not able to enter into a sustained period of modern economic growth in the nineteenth or even the first half of the twentieth century. First, it took China over a century to jetison its traditional mode of governance and replace it with a government that would systematically promote modern economic growth, and the process involved numerous wars and civil wars that would have disrupted the best economic development plans of any government. Second, even when the Chinese government did enjoy periods of peace and stability, the dominant forces within that government vigorously resisted any fundamental change of the kind that modernization of the economy and society would have required.

The disruption caused by war and civil war in China before 1949 was massive and ongoing. China fought and lost its first war to the Western powers in 1839–1842. That war was not very disruptive of the economy and had the positive economic effect (but seen as not at all positive from a Chinese political perspective either then or now) of opening up the Chinese economy to more foreign trade. However, the Taiping Rebellion that followed and lasted for fourteen years (1850–1864) was extremely disruptive. It began in China’s southern interior provinces and before it was over it had left waste not only to parts of the interior but also to the richest area of the country at that time, the lower Yangzi River Delta. The number of people who died as a direct result of the rebellion has been estimated to have been over 20 million and the total population of China may have declined over that period by as much as 75 million. The Taiping Rebellion was eventually put down, but China toward the end of the Taiping period lost a second war to the Western powers. At the end of that three-decade period of peace China lost a war with Japan in 1895 that involved a large indemnity that the Chinese government could ill afford to pay together with the loss of Taiwan, which at that time was something of a backwater and hence not of great economic significance for the rest of China. This defeat was followed by the uprising of the Boxers in North China and the siege of the legation quarter in Beijing in 1900. The invasion and defeat of the Boxers by the Western powers plus Japan led to the Boxer Protocol of 1901, which imposed a 67 million pound indemnity on China, a very large sum for that time. The dynasty staggered on for another ten years before col-
laxing as a result of the Xinhai or Republican Revolution of 1911. The political maneuvering of the new republic in 1912 first produced Sun Yat-sen (Sun Zhongshan) as president but quickly moved on to make General Yuan Shikai president. Yuan Shikai's failed attempt to make himself the first emperor of a new dynasty ended with his death in 1917. There then followed more than a decade of what is generally referred to as the warlord period in modern Chinese history. Various generals controlled parts of China's northern provinces and the Nationalist Party of Sun Yat-sen together with other generals controlled various parts of the south. The nominal leader of the government recognized by the foreign powers was whoever controlled Beijing at the time. As Joseph Esherick points out in chapter 1, foreign recognition was important because customs revenues were delivered to the Beijing government. There was not all that much fighting but neither was there a government anywhere that could carry out a development program and many of the local warlord governments depended on predatory taxation for survival.

In 1927 the army created by the Nationalist Party and led by General Chiang Kai-shek (Jiang Jieshi) marched north and by a combination of military action and negotiation with some of the warlords established a kind of unity over the entire country. Chiang then turned his attention to eliminating the Communist Party, but their small rural bases proved stubborn. More important from the standpoint of any Nationalist program to promote economic growth was the Japanese seizure of China's northeastern provinces in 1931 and the formation of the puppet state of Manchukuo. This was followed in 1937 by an all-out Japanese attack on the rest of China that soon drove the Nationalist government and army out of the coastal cities into China's interior with its capital at Chongqing. The Communists controlled mountainous areas in the northwest but gradually extended their control to large parts of northern China surrounding the Japanese-controlled cities and transportation inks. The defeat of Japan in 1945 led to all-out civil war between the Nationalists and Communists that ended in the establishment of the People's Republic of China in 1949.

This brief recitation of a century of Chinese political and military history paves the way toward explaining why China's economy did not develop in the period between the initial challenge of the Western powers and the eventual triumph of the Communists. Long-term investors require a stable political and policy environment for their investments and China during most of this century could provide neither. Investing in a battlefield is rarely an attractive option. But neither was it possible to invest long term when government leaders and their policies changed frequently if they had any economic development policies at all. Investors other than Japanese could not count on a stable environment in Japanese-held territory even if they were willing to put aside their opposition to the Japanese invasion. The only places of stability in the country throughout most of this period were the treaty port cities with their areas set aside for foreigners and controlled by foreigners. Chinese and others did invest in these areas, but it was a poor substitute for a stable country and a development-oriented government.

Instability is thus a major part of the story of why China did not develop, but it is not the whole story. China, as already mentioned, did have a period of peace during which it might have been able to start a major development effort but it failed to do so. The period is known as the Tongzhi Restoration, so titled because that was the reign name of the emperor who was in office at the beginning of the period. The Tongzhi emperor reigned from 1860 through 1875 but the period of peace lasted much longer until the Japanese attack of 1895. And defeat by the Japanese in 1895 could have led on to a very different result from what actually happened (the Boxer Uprising) if the Guangxu emperor and his advisors (Kang Youwei and Liang Qichao) had managed to fully implement the reforms they began in 1898 soon after the young emperor came of age. There was also a considerable period between the death of the Tongzhi emperor and the coming of age of the Guangxu emperor when there were efforts at reform at the provincial level that could have been built on to become a major economic reform effort. But no such broad-based development effort occurred. Why not?

The primary reason why China was not able to take full advantage of this peaceful interregnum was that power in the Qing dynasty government rested with the Empress Dowager Cixi and a large number of conservative officials. The power of these individuals, however, was not a historical accident. These people to a large degree represented the values that had always governed traditional China and were still believed to be valid by large parts of the educated population and political leadership of the country in the late nineteenth century. The challenge for China, in their view, was not to fundamentally change the Chinese traditional system of governance but to restore its vitality. Even these conservatives recognized that the West had better weapons and better ships and so they did not oppose the creation of the first modern industrial enterprise in China, the Jiangnan Arsenal founded in 1865. But most of the efforts of the period were devoted to making the traditional system work better by putting good men in key positions.

There were provincial governors, notably Li Hongzhang and Zhang Zhidong, who saw the Western challenge in somewhat broader terms. They did promote a few industrial enterprises in the 1870s and 1880s through a system called "official supervision merchant management" (guandu shangban), a hybrid that guaranteed that these enterprises would struggle to become profitable and even to survive. One major problem throughout this period was
that it was difficult to attract funding for industrial enterprises and for other modernization measures such as the building of railroads. The private sector was reluctant to invest and typically required guaranteed rates of return and the government itself had very limited tax revenues. China’s lack of government revenue was the secondary reason why the Qing government failed to develop a successful economic modernization program. The land tax, for example, was the major tax but it amounted to no more than 2 percent of Chinese GDP at the time. There was a domestic commercial tax, the lijin, that produced some revenue but not as much as the land tax, and then there was the customs revenue that was managed by foreign officials and produced significant revenue, much of which was tied to the repayment of foreign loans. The government in Beijing and the provincial governors had very little in the way of discretionary funds and most of these were eaten up fighting or preparing to fight various rebellions and foreign incursions. There is a striking contrast with the government of Meiji Japan that commanded revenue that amounted to over 10 percent of Japanese GDP and an even higher percentage in late Tokugawa.

Japan’s defeat of China in 1895 had one positive outcome from the point of view of economic development. For the first time foreign direct investment in industry and commerce was made legal in China and foreign investors did begin to enter mainly in and around the treaty ports where their investments were safer. The other “positive” impact of the loss to Japan was that it built an impetus for reform that was much broader than what had occurred up to that time. The initial reform effort, however, lasted for only “100 days” and then was snuffed out by the Empress Dowager and the court conservatives. The key reformers fled the country and the authority of the young emperor was taken away. Instead the conservatives at court made a last ditch effort to drive out foreigners and Chinese who had acquired foreign ideas (mainly from missionaries). This effort failed utterly and eventually spelled the end of the dynasty.

The defeat in 1898 of the hundred days of reform and the Boxer Uprising, however, did not bring a halt to China’s growing if still feeble efforts to modernize its economy. Despite all of the disruption caused by war and civil war in the first half of the twentieth century, China did experience growth in the small modern sector of the economy. Overall GDP growth until the Japanese invasion in 1937 was only 1.8 to 2 percent per year, but modern industry alone grew at 9.4 percent per year between 1912 and the end of 1936. During this period a modern banking system was established and a wide variety of new laws governing the economy were passed. China’s university system was also transformed into something approximating a Western-style university system, aided in no small part by Christian mission-sponsored schools. Increasing numbers of Chinese also went abroad to study. In one of the most farsighted gestures of American diplomacy toward China, the US portion of the Boxer indemnity was turned back to China in the form of support for study abroad in the United States. In China’s northeast there was also substantial development of industry and railroads, but in the service of the Japanese empire.

Most of the industrial and infrastructure capital built during the last decade of the nineteenth century and the first four decades of the twentieth century was destroyed during China’s war with Japan and its aftermath. Much Chinese-owned industry and equipment was moved inland ahead of the Japanese forces. This enabled China to continue to produce certain civilian and military essentials during the war, but most industrial capital was obsolete by the time the war ended. The capital invested in China’s northeast by Japan was largely caved off to the Soviet Union as “compensation” for the Soviet entry into the war against Japan in August 1945.

It is not clear just what the legacy of development in the first part of the twentieth century is for China’s economic development after 1949 or after 1978. The topic has never been systematically studied. We do know from the experience of Germany and Japan after World War II, however, that what matters most for future development is not the physical capital—most of which was destroyed by Allied bombs in Germany and Japan—but the human capital that existed in the many workers, engineers, and managers who had survived the war. These people understood the old technology and knew how to acquire the new technology and they knew how to organize themselves to build and run new factories and infrastructure. In China after 1945 there were hundreds of thousands of people with this kind of human capital.

Not all of those with this kind of experience stayed in China, however. With the victory of the Communists in 1949, many with relevant skills fled to Hong Kong, Taiwan, and even farther afield. In addition, China after 1949 also adopted a very different economic system, a centrally planned command economy modeled on that of the Soviet Union. Individuals with experience in Western-style banks and other financial institutions and even many industrial managers found their skills of little relevance in the new system. On top of that the “three and five anti” movements of 1951 and 1952 during the height of the Korean War removed additional experienced personnel from positions where their skills could have been used.

In sum, although China by the 1940s was in desperate straits after the war with Japan and the ensuing civil war, intrinsically traditional China was neither a “failed state” nor a failed economy. Had British warships not appeared on its horizon, it is likely that China would have continued managing its domestic affairs as it had done for centuries even as the world balance of industrial capacity shifted more and more decisively to the West. Inevitably the disparity would have been noticed and perhaps structural reforms would have
been attempted. But this imaginary course of events underlines two weaknesses of China's traditional order. It was mortally vulnerable to a modernized West, and it was not capable of internally transforming its traditional institutions and outlook. The ensuing disruption further hampered the emergence of a modern economy until order was restored in 1949.

Nevertheless, traditional China left much more than memories for its later leadership to build on. National political and economic unity, the habits of bureaucratic governance, education and a patriotic intellectual elite—all of these formed the foundation of what China could do next, and not every new state has been so fortunate.

THE POST-1949 PRE-1978
CHINESE ECONOMY AND ITS LEGACY

China in 1949 was therefore still very poor but it was not entirely "poor and blank" as Mao Zedong said in those early years of Communist Party rule. In addition to the inherited experience of the past centuries, the Communist movement that came to power brought with it skills of its own acquired in battle and in efforts to mobilize the territories it controlled to support the war effort. The Communists not only fielded a large army. They equipped that army with weapons and managed the supplies for that army in ways that were designed not only to mobilize the people in the territories that they controlled. Rural revolution is not easy, and Marxism provided no model for it. Mao Zedong had to generate political support and military power by transforming rural areas, village by village, into revolutionary bases. Some of the skills so acquired contributed to the development efforts that began in the early 1950s. These skills certainly contributed to the Communist Party's ability to govern country with over 500 million people. On the other hand, as was demonstrated in the leftist era from 1957 to 1976, some of these same skills misapplied could also bring about economic and social disaster.

In the early 1950s China began to introduce a Soviet-style command economy. This way of managing an economy required information and skills very different from either a rural revolution or a market economy. The government first draws up a plan for the industrial and commercial sectors that specifies how much output of each product is required and what inputs will be needed to produce that output. These plan targets are then translated into individual reduction and input use targets for each individual enterprise. Even in the 1950s in China there were thousands of industrial and commercial enterprises, although most were quite small. Backing up the plan was an input distribution system that was run by a government bureaucracy and which allocated inputs according to the plan. As a further backup, the main role of the banking system (which was consolidated into one large mono-bank that performed both central bank and commercial bank roles) was to make sure that enterprises spent money in accordance with the plan. If an enterprise was in accordance with the plan, the bank would allow it to use the funds it had on deposit, or, if these funds were insufficient, the bank would lend the enterprise the difference.

This system required a planning bureaucracy staffed by thousands of individuals trained to analyze the various sectors of the economy and come up with the output and input targets. It also required an even larger administrative bureaucracy with similar skills to distribute the inputs and acquire and distribute the output of these enterprises and to manage the banking system. Such bureaucratic skills are quite different from the entrepreneurial and technical skills required in a competitive market economy. In China these planning skills had to be learned from scratch after 1949 since no such system had existed in China previously. Furthermore, these large bureaucratic organizations had to be managed in accordance with the technical requirements of planning. There was little room for senior managers to hire their unskilled friends, relatives, and political allies or to apply political as contrasted to technical criteria in the allocation of inputs or the setting of targets. Despite these strict requirements, China began to introduce this system in the early 1950s and the industrial and urban commercial economy was largely run by such as system by 1955–1956. Soviet advisors did play an important role in helping China set up this way of managing the economy, but the staffing was largely Chinese.

It would be impossible for many developing countries to introduce such a system and make it function reasonably well. A country such as Indonesia that had only a handful of university graduates at the time of independence, had an inexperienced and poorly trained bureaucracy, and a political leadership that before 1965 cared little for following technical requirements, could not have made such a system function with even a minimum of effectiveness. Much of Sub-Saharan Africa where the education base was similar to that of Indonesia and whose societies were often deeply divided along ethnic and other lines could not have made such a system function. Those few that tried to create an industrial base by moving in this direction failed without exception.

What was it that allowed China to introduce and run this system well for a time? The answer has to be the nature of China's premodern experience involving an emphasis on education, experience with running a large government bureaucracy, and a leadership that to a substantial degree could minimize politics and rent seeking in decisions that had to be made on technical grounds. China was not alone in having this capacity. India introduced many of these features into parts of its economy as did Vietnam at a somewhat later
date, but in most developing economies the introduction of such a system would have led and sometimes did lead to economic disaster. Most commonly, developing countries that moved in this direction in their industrial development efforts simply failed to develop much industry and what they did develop could not compete in the international market. China's economy during the First Five Year Plan period (1953–1957), in contrast, grew at 6 percent per year and industrial output grew at 19.6 percent per year.53

Mao Zedong, however, was not satisfied with this performance or with the tight technical strictures that the centrally planned command economy imposed on economic decision making in China. The system had never really been practical in the agricultural sector where most of China's labor force worked and Mao argued that the system was too restrictive for the industrial sector as well. He believed that China could do much better if it relied on the political mobilization skills that had played a central role in the Communist victory in the civil war. The result was the Great Leap Forward (1958–1960) that was designed to enable China to leap ahead of such industrial economies as Great Britain.

The method involved pressuring enterprise and local community cadres to use their imagination and the energies of their workers to expand production at an unprecedented pace. Local communities were to build their own small “backyard” iron and steel furnaces that would lead to a large jump in iron and steel output. Larger modern enterprises were encouraged to tear up their old plans and replace them with far more ambitious plans without any effort to coordinate these new plans with the rest of the economy or with the Soviet Union that would have had to supply the additional equipment required in many cases. The result, as is well known, was a collapse in industrial output and an enormous waste of China's limited resources. The backyard furnaces ended up melting down great quantities of useful iron and steel implements in order to produce large amounts of unusable low-quality crude iron and steel ingots. In the agricultural sector, a similar political mobilization effort was the primary contributor to three years of harvest failures (1959–1961) that were responsible for the deaths of around 30 million people.

In effect, the Great Leap Forward made little use of the strengths of China's premodern economy and society, the presence of substantial numbers of educated people and experience running bureaucratic organizations. Instead China's leaders turned to their revolutionary political skills that were important in winning the civil war but had little relevance to running the economy. Revolutionary leaders seldom make good managers of the economic development process. They have highly developed skills but not ones suitable to running a modern economy. The list of failed economic programs led by the founders and revolutionary leaders of newly independent countries is a long one and includes Sukarno in Indonesia, Nehru in India, Syngman Rhee in South Korea, Nkrumah in Ghana, Mugabe in Zimbabwe, and Le Duan in Vietnam, among others.

What worked in primitive base areas fighting for survival was an absolute failure in a large state trying to accelerate modernization. The primary problems of the Great Leap Forward were that technical criteria were abandoned in favor of political criteria in economic decision making and that there was no mechanism for coordinating these decisions even when they may have made sense at the individual enterprise level. A national economy has to have a coordinating mechanism and the only methods available are either a central plan or markets. China in 1958–1960 used neither planning or markets.

The experience of the Great Leap Forward led Mao Zedong to largely remove himself from economic decision making. The system of central planning was rehabilitated by others in the early 1960s with one important change. Much of the planning and control of the economy was now done at the provincial level and below rather than everything being centered in Beijing. In agriculture there was even experimentation with a return to household agriculture in some regions of the country.

Mao Zedong, however, soon came back into the decision-making picture in ways that had some impact, mostly negative, on the economy. Mao's goal, however, was no longer to transform the economy at a rapid pace. His stated goal was to transform Chinese society by changing its values to “all public and no private” (da gong wu si 大公无私). Some argue that Mao's real goals had mainly to do with keeping himself in power, but whatever his true motivation, he unleashed a movement that had a traumatic impact on Chinese society. The Great Proletarian Cultural Revolution (1966–1976) only directly disrupted the economy in a major way for two or three years in the late 1960s. Its overall impact upon Chinese politics and society was pervasive and lasted for the decade of the Cultural Revolution itself and for many years thereafter.

The main effect of the movement was that it inflicted enormous pain on large numbers of Chinese people. Anyone with ties to foreigners was persecuted. Teachers, normally an object of great respect in traditional Chinese society, were attacked by their students and driven from their jobs and sent off to the countryside to do manual labor. The students themselves were then sent off in large numbers to the countryside often for many years during the middle of the period when they otherwise would have been in school. Factory managers and chief engineers were sometimes locked in a factory room for months or a year and more. But probably most important from the standpoint of what happened after the end of the Cultural Revolution, most of the leadership of the Chinese government and of the Chinese Communist Party was persecuted, removed from their jobs, and sent off to the countryside to per-
CONCLUSION

The process that led to the steady development of the centrally planned Chinese rapid economic development over the three decades since the reform

The Chinese economic development model, characterized by its central planning and rapid growth, has been highly successful. The implementation of the Chinese economic reform has led to significant economic growth and poverty reduction. The Chinese model of economic development has been widely studied and emulated, particularly in other developing countries. The Chinese economic development model is based on a combination of central planning and market mechanisms, which has allowed the country to achieve rapid economic growth. The Chinese model has been successful in poverty reduction and has contributed to the country's rapid economic growth. The Chinese economic development model is a testament to the potential of combining central planning and market mechanisms to achieve rapid economic growth and poverty reduction.

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traditional system. When unity under a modern system was achieved in the 1950s, it was the wrong modern system for China’s conditions, or at the very least it was not as effective a system as first China’s neighbors and then China itself adopted after 1978. Conceivably China could have continued with that centrally planned command system after 1978, but the extreme disruptions of the Cultural Revolution together with the leadership of Deng Xiaoping created conditions that made much more fundamental change possible. That much more fundamental change in policy combined with the capacity of the Chinese people based on the heritage of both the premodern period and of the first decades of Communist rule to produce the extraordinary economic performance that the world has witnessed over the past three decades.

NOTES

1. The civil war did end, to be sure, with Taiwan as a separate political entity from the mainland, but the sustainability of this split was never made possible by the US military presence in the Taiwan Straits in the context of the Cold War and later by the Taiwan government’s success in achieving both rapid economic development and the political liberalization within its territory. This split, having lasted for sixty years and having been built on Taiwan’s political separation from the Chinese mainland from 1895 to 1945, continues to be a source of potential instability. There are also minorities within the Chinese mainland some of whom would prefer to be independent of Chinese control but altogether they make up only 6.4 percent of the total population of the People’s Republic of China.


5. See, for example, the comparison of a wide variety of Chinese and European technologies in the premodern era by Kenneth Pomeranz, The Great Divergence: China, Europe and the Making of the Modern World Economy (Princeton, NJ: Princeton University Press, 2000). One relevant piece of evidence is that the Jesuit mission to China in the seventeenth century brought with them much of the best technology then in use in Europe. The clock and astronomical instruments and knowledge the Jesuits brought with them were superior to the technology in those areas then in use in China, but there was little that the Jesuits had to offer in other areas of technology that the Chinese did not already have.


13. Leo Orleans, Professional Manpower & Education in Communist China (Washington, DC: National Science Foundation, 1961). In the 1930s universities in China had an average enrollment of forty thousand students and that number rose to over a hundred thousand in the late 1940s just prior to the Communist Party’s takeover of the government.


22. The official net material output (national income in Chinese) growth rate figure for the First Five Year Plan period is 8.9 percent per year, but this figure was obtained using the very high relative prices for industry that exaggerate the true growth rate if that rate is measured in market prices of a year when the market determined prices (a year such as in the 2000s for example).