8

Commerce and Manufacturing Under the Impact of the West

Throughout the late imperial period, the Europeans had been kept on the margins of Chinese economic life. They had plugged their trade into the existing commercial networks of the empire, but imparted little influence on either the ways or the values of Chinese life. After the Opium War, however, fueled by the resources and dynamism of the Industrial Revolution and incited by Chinese political and military weakness, the West began pushing China's commercial and manufacturing sectors onto a new evolutionary track. The Chinese, initially at least, resisted the changes being thrust on them, and the nation became an object of international derision because of its backwardness and weakness.

Why China responded so slowly to the economic challenges and opportunities of the nineteenth and early twentieth centuries has been a continuing source of puzzlement and debate. Some historians believe that exploitation and oppression by the imperialist powers inhibited Chinese efforts to develop a modern economy; others hold that the obstacles to economic modernization lay within China itself, in the very culture of the nation and the people. This question is obviously related to the problem of why China did not move into a stage of industrial growth in the sixteenth to eighteenth centuries. But the difficulties that China encountered during the early modern period in borrowing the technologies developed in the West, and in adapting to an expanding commercial world, were special unto themselves.

Foreign Trade

The British had initially ventured to China to *purchase* Chinese products—silk, tea, porcelains, and nankeens. By the nineteenth century, however, the prodigious and unprecedented productive powers of its factories had shifted Britain's ambitions to *selling* to the Chinese. Sir Henry Pottinger, British plenipotentiary in

China, expressed the mercantile optimism of the British when he announced the signing of the Treaty of Nanking in 1842. The treaty, he boasted, opened to the world a trade so vast "that all the mills in Lancashire could not make stocking stuff sufficient for one of its provinces."[1] For a brief time following the opening of the five treaty ports in 1843, it appeared that Sir Henry's optimism was well founded, for the stoppage of the trade during the fighting in the Opium War had created a backlog of demand. After peace returned, therefore, British cotton and woolen fabrics sold out quickly and at good prices. But in 1845, China's purchases fell to two-thirds of those of the preceding year. Throughout the remainder of the 1840s, the trade depression continued. Even by 1850, British exports to China had barely regained the 1843 level, and in 1854, they were again declining. As was to happen repeatedly during the next century and more, the foreigners' dreams of immense sales to China's vast population—the so-called Myth of the China Market—proved to be illusory.

Looking back now, British hopes for the China trade after the Opium War appear incredibly naïve. A leading Sheffield cutlery firm, for example, ignoring the fact that chopsticks are perfectly suited to eating Chinese cuisine, dispatched a large shipment of table knives and forks to China. A piano manufacturer sent a "tremendous consignment of pianofortes," based on the conviction that at least 1 million of the 300 to 400 million Chinese would want to play the musical instrument that had so many devotees in the living rooms of Europe.[2] With respect to the cultural differences between England and China, British merchants retained a monumental indifference or ignorance. And when the Chinese did not purchase their goods in the quantities expected, the merchants faulted not themselves and their economic calculations, but the Chinese and the political obstructionism of the Chinese officials. The problem, they were convinced, was that the post–Opium War treaties had not truly opened the China market, that foreign trade was still confined to the fringes of China, and that it was confronted by a restrictive system of monopoly brokers. They therefore demanded that more treaty ports be opened, especially in north China, and that they be granted the right to travel and conduct business freely in the interior of the country. By 1850, the British prime minister, Lord Palmerston, had likewise become convinced that Chinese political obstructionism was the true reason that the fruits of victory in the Opium War had been so meager. Force was the manifest solution:

> I clearly see that the Time is fast coming [wrote Palmerston] when we shall be obliged to strike another Blow in China, and that blow must be the occupation of a Position on the Yangtse Kiang [River] to cut off communication by the Great Canal. But it would not be advisable to give the Chinese any intimation that such would be our measure. They should be left to reflect upon it when and after it was done. These half civilized Governments, such as those of China Portugal Spanish America require a Dressing every eight or Ten years to keep them in order. Their Minds are too shallow to receive an Impression that will last longer than some such Period, and warning is of little use. They care little for words and they must not only see the Stick but actually feel it on their Shoulders before they yield to that only argument which to them brings conviction, the *argumentum Baculinum* ["persuasion by the stick"].[3]

Table 8.1. Imports of China (in percent)

Year	Total Value (customs taels)	Opium	Cotton Goods	Cotton Yarn	Cotton Raw	Cereals, Wheat Flour	Sugar	Tobacco
1868	63,282	33.1	29.0	2.5	—	0.8	0.8	—
1880	79,293	39.3	24.9	4.6	—	0.1	0.4	—
1890	127,093	19.5	20.2	15.3	—	9.6	0.9	—
1900	211,070	14.8	21.5	14.3	—	7.0	3.0	0.5
1905	447,101	7.7	25.6	15.0	—	2.9	5.1	1.4
1913	570,163	7.4	19.3	12.7	—	5.2	6.4	2.9
1913	570,163	—	19.3	12.7	0.5	—	6.4	2.9
1920	762,250	—	21.8	10.6	2.4	1.1	5.2	4.7
1928	1,195,969	—	14.2	1.6	5.7	8.3	8.3	5.1
1931	1,433,489	—	7.6	0.3	12.6	12.6	6.0	4.4
1938	604,329	—	1.5	0.2	3.8	4.6	2.2	1.8

The result of such cultural arrogance and economic obtuseness was the Second Opium War (1856–1860; sometimes called the Arrow War), which resulted in a second series of treaties. These agreements provided the access that the merchants demanded. Eleven additional treaty ports were to be opened (by 1917, a total of ninety-two ports had been opened to foreign trade),[4] and foreigners gained the privilege of traveling freely in the interior of the country.

The trade, however, developed with frustrating slowness. By 1913, the value of China's total foreign trade had risen almost eight times above the 1868 level, but most of that increase had come only during and after the 1890s. And even in 1913 the exports and imports combined still amounted to only U.S.$1.61 per capita, which figure placed China at the very bottom of a list of eighty-three countries worldwide.

Among the items *imported* by China, only one foreign product found a sure market in China before 1890. That was opium. Ironically, the post-Opium War treaties of 1842 to 1844 had avoided even mentioning the drug, and thus it had continued to be traded as contraband until 1860, when sales were nearly double those on the eve of the Opium War. The treaties of 1860 finally legalized the trade in opium, which continued for the next thirty years to be the foreigners' most valuable import to China. By 1890, however, domestic cultivation of the poppy cut into foreign sales of the drug. After 1908, the British government—its moral scruples finally affecting its policy (besides, the trade was not as profitable as it had been)—imposed progressively tighter limits on sales of opium to China and halted them altogether in 1917. By 1890 opium's place at the top of the list of China's imports was taken by cotton goods and cotton yarn—long the second most important foreign imports to China—partly because opium imports had fallen slightly and partly because sales of cotton cloth increased (Table 8.1).

After World War I, China's import picture changed dramatically. Before 1900, cotton products and opium had together accounted for between 50 and 70 percent of all Chinese imports. But after the war, opium was no longer imported, and the

Table 8.1 (*Continued*)

Paper	Coal	Kerosene	Liquid Fuel	Transportation Materials	Chemicals, Dyes, & Pigments	Iron, Steel, & Other Metals	Machinery	All Others
—	2.1	—	—	—	—	4.8	—	26.9
—	1.2	—	—	—	—	5.5	—	24.0
—	1.6	3.2	—	—	—	5.7	0.3	23.7
—	3.1	6.6	—	—	—	4.7	0.7	23.8
—	1.6	4.5	—	1.8	—	10.4	1.2	22.8
—	1.7	4.5	—	0.8	—	5.3	1.4	32.4
1.3	—	4.5	—	0.8	5.6	5.3	1.4	34.2
1.9	—	7.1	0.4	2.6	6.4	8.3	3.2	24.3
2.4	—	5.2	1.4	2.3	7.5	5.4	1.8	30.8
3.2	—	4.5	1.8	2.3	8.0	6.2	3.1	27.4
4.1	—	4.2	4.1	5.6	10.8	13.2	6.4	37.5

Source: Yu-Kwei Cheng, *Foreign Trade and Industrial Development of China: An Historical and Integrated Analysis Through 1948* (Washington, D.C.: University Press of Washington, D.C., 1956), pp. 19, 32. Reprinted by permission.

importation of cotton goods and yarns declined as domestic manufacturing of those products increased. Indeed, China became a net exporter of yarn by 1928 and of cotton piece goods by 1936. As imports of manufactured cotton products declined, however, those of raw cotton, needed to supply China's growing textile industry, rose from 0.5 percent of total imports in 1913 to a peak of 12.6 percent in 1931. Also reflecting the growing maturity of China's industry was the growth of imports of machinery and industrial raw materials (iron, steel, chemicals, dyes, and the like), which together rose from 12 percent of total imports in 1913 to more than 30 percent in 1936.

The sale of imported goods to China's retail merchandisers was generally dominated by Chinese, not foreign, merchants. After the Chinese interior was opened to foreign travel in 1860, foreign sellers of, for example, cotton yarns and cloth established branch offices in even the smallest treaty ports, where they endeavored to sell their goods directly to Chinese retailers. But Chinese merchants were more familiar with local dealers and conditions, and their distributing and operating costs were lower. As a consequence, the foreign importers soon abandoned their efforts to market cotton goods in the interior and restricted their efforts to making the initial sales at the main ports of entry, such as Shanghai and Hong Kong. As early as the 1890s, many foreign firms had ceased even to import the goods on their own account, acting instead as brokers by taking orders for goods from the Chinese and then receiving commissions on delivery. By 1915, foreign merchants delivered only about 11 percent of all imported goods directly to local Chinese dealers, the remainder being delivered and sold by Chinese wholesalers. "With their knowledge of the Chinese mentality, language, and market conditions," it has been aptly remarked, the Chinese merchants "were able to beat the foreigner at his own game."[5]

Table 8.2. Exports of China (in percent)

Year	Total Value (custom taels)	Tea	Silk & Silk Goods	Seeds & Oil	Beans	Beans & Bean Cake	Eggs & Egg Products
1868	61,826	53.8	39.7	—	1.0	—	—
1880	77,884	45.9	38.0	0.1	0.2	—	—
1890	87,144	30.6	33.9	0.6	0.4	—	—
1900	158,997	16.0	30.4	2.5	1.9	—	—
1905	227,888	11.2	30.1	3.4	3.0	—	0.9
1913	403,306	8.4	25.3	7.8	5.8	—	1.4
1913	403,306	8.4	25.3	7.8	—	12.0	1.4
1920	541,631	1.6	18.6	9.1	—	13.0	4.0
1928	991,355	3.7	18.4	5.8	—	20.5	4.4
1931	909,476	3.6	13.3	8.4	—	21.4	4.1
1936	452,979	4.3	7.8	18.7	—	1.3	5.9

The import trade, in the final analysis, had a relatively small impact on the average Chinese. Most imported goods never left the treaty ports, being purchased by consumers in those foreign sanctuaries. Except for such commodities as yarn, kerosene, and matches, which patently filled a real need, Chinese consumers in the interior were generally too poor to purchase foreign goods, most of which seemed to be luxuries. "Anyone," Albert Feuerwerker has remarked, "who would claim that the Hunan or Szechwan peasant in the 1930's dressed in Naigaiwata cottons, smoked BAT [British-American Tobacco Company] cigarettes, and used Meiji sugar has a big case to prove."[6]

The export trade, by contrast, had far-reaching consequences on the Chinese people. Critics of imperialism have contended that those consequences were ruinous to the Chinese economy, because Chinese producers concentrated their meager resources on producing for the foreign market and thus became in thrall to foreign markets, whose demand and prices rose and fell with unpredictable and disastrous results. That is, tempted by short-term gains proffered by the international market, Chinese producers first abandoned their traditional self-sufficiency. Then when foreign demand fell, they were ruined. As this indictment implicitly acknowledges, however, producing for the export market could be profitable.

From the 1860s until the eve of World War I, tea and silk were China's chief exports, but the pattern of exports changed significantly. In 1868, tea and silk together constituted 94 percent of the value of all outgoing trade (tea accounting for 53.8 percent; silk, for 39.7 percent). Thereafter, however, China lost its world dominance in these commodities. In the 1880s, teas from India and Ceylon began competing with the Chinese leaf, and by 1910, these countries were selling twice as much on the world market as was China. China's trade in silk, by contrast, remained relatively strong despite growing competition from Japanese suppliers. In 1887, silk, in its raw and its manufactured forms, supplanted tea as China's leading export.

Because Chinese during the decades before World War I had begun producing

Table 8.2 (*Continued*)

Hides, Leather, & Skins	Cotton (mostly raw)	Cotton Yarn & Cotton Goods	Wool	Coal	Ores & Metals	All Others
—	0.9	—	—	—	—	4.6
0.5	0.2	—	0.4	—	—	14.7
1.4	3.4	—	1.6	—	—	28.1
4.3	6.2	—	1.9	—	—	36.8
6.6	5.3	—	3.7	—	—	35.8
6.0	4.1	—	2.4	1.6	—	37.2
6.0	4.0	0.6	—	1.6	3.3	29.6
4.3	1.7	1.4	—	2.3	3.2	40.8
5.4	3.4	3.8	—	2.9	2.1	29.6
4.1	2.9	4.9	—	3.0	1.6	32.7
5.7	4.0	3.0	—	1.6	7.7	40.0

Source: Yu-Kwei Cheng, *Foreign Trade and Industrial Development of China: An Historical and Integrated Analysis Through 1948* (Washington, D.C.: University Press of Washington, D.C., 1956), pp. 19, 34. Reprinted by permission.

other products for the export market, the relative importance of tea and silk in China's export profile had diminished sharply. Tea accounted in 1913 for only 8.4 percent of China's exports, while silk had dropped to 25.3 percent. By 1936, these figures had fallen, respectively, to 4.3 percent and 7.8 percent. Rising in importance on the list of exported items were products from Manchuria, whose soybeans and bean cake had by the mid-1920s become China's most important exports. Manchuria was wrested from Chinese sovereignty in 1931–32, however, and the export of beans and bean cake consequently fell from 21.4 percent of the total in 1931 to only 1.3 percent in 1936. Vegetable oils, leather and hides, and eggs and egg products were other steady exports, revealing the continuing strength of at least some of China's handicraft industries (Table 8.2).

That the livelihood of China's peasants could be profoundly affected, both positively and negatively, by producing for the export market was evidenced by the vicissitudes of the silk industry (Chapter 5). But the fate of the silk producers did not represent that of all Chinese who produced for the export market because China was remarkably successful in the early twentieth century in diversifying its export trade (Table 8.2). Shifts in the international market did not, therefore, have the same pervasive reverberations in China as they did in, say, Brazil or Cuba, where coffee and sugar, respectively, accounted for a large percentage of the exports.

The tribulations of the silk trade, moreover, were only partly attributable to the vagaries of the foreign market. China's competitive position in the world silk market was badly damaged, as we have seen, by the failure of the industry to maintain standards of quality for its products. Similarly, leaf-tea, which had been China's major export item until the end of the nineteenth century, failed to compete with upstart rivals in Japan, Indian, and Ceylon, in large part because of the poor quality of the Chinese product—producers and middlemen alike often adul-

terating the tea shipments with substandard teas or even with weeds and sand. Other export items, such as vegetable oils, soy beans, and straw braids, also failed to capitalize on their early export potential as a result of adulteration and shoddy workmanship. "As in so many other instances in China," observed the Commissioner of Customs in Hankow in 1923, "a decline in quality upon an increased demand being apparent has already set in, and adulteration [of wood oil] with oils of lesser value, such as sesamum, is already the rule and not the exception."[7] Chinese producers and merchants, it seems, were often afflicted with a bazaar mentality, grasping at short-term profits without regard for long-term development.

On balance, China's producers benefited from the expansion of foreign trade, both import and exports. If the producers had been sufficiently motivated or the government in Peking or Nanking (like that in Tokyo) had been sufficiently strong to maintain quality standards, the benefits would have been even greater.

Banking

Although the primary goal of the foreigners in China had been trade, their activities quickly spilled over into other sectors of the economy. This was largely because the traditional Chinese economy was weak in such services as international banking, insurance, shipping, mining, and manufacturing, all of which were essential to the foreigners' successful conduct of trade.

During late imperial times, China's native banks—the *qianzhuang* and the Shansi remittance banks—effectively met the needs of domestic commerce. The foreign merchants, however, being outsiders, could not easily obtain credit from them. Nor were these native banks equipped to service international financial transactions, such as the exchange of foreign currencies. As early as 1845, therefore, the British-chartered Oriental Banking Corporation established a branch in Hong Kong and three years later in Shanghai. During the next twenty-five years, branches of a dozen other foreign banks, most of which were Anglo-Indian in background, began operations in Hong Kong.

The intricacies of China's domestic trade remained a closed book to the Europeans who ran these new banks, however, and a bank that was created expressly to service the China trade soon overshadowed all competitors. This was the Hong Kong and Shanghai Banking Corporation, chartered in England in 1864. After 1889, banks representing the interests of other foreign nationals quickly followed suit.

The principal function of these banks was financing foreign trade. Foreign traders who were exporting goods from China needed credit to cover the period from the time they purchased goods in China until they received payment for delivery abroad. Importers similarly needed capital to pay for goods until they received payment from Chinese dealers. The largest of the trading firms, such as Jardine, Matheson and Company, were not heavily dependent on such credits, but the bulk of the trade was conducted by a host of lesser merchants who were able to survive only with the loans provided by these foreign banks. The importance

of this banking service is suggested by the fact that the thirty-two foreign banks in China and Hong Kong in the early 1930s financed some 90 percent of China's foreign trade.

Foreign banks also served the Chinese. They extended credit to the Chinese government, to private enterprises, and even to *qianzhuang*. Chinese citizens—especially wealthy officials, warlords, and landlords—were major depositors in these foreign banks because they were more concerned about the security of their wealth than about the higher return that they could obtain from the native Chinese banks. The foreign banks also served as depositories for the Chinese government, which customarily repaid its foreign debts, such as loans and indemnities, through these banks. They also issued paper currencies, which circulated widely from the late nineteenth century until the 1930s. Indeed, between 1910 and 1930, these foreign-issued bank notes equaled or exceeded the value of all Chinese-issued bank notes, public and private. The foreign bank notes, solid in value and far more convenient than the silver currency, were highly popular with the Chinese, whether issued in denominations of taels, Hong Kong dollars, Chinese dollars, or foreign currencies. Chinese provincial banks, by contrast, tended to issue unbacked paper money that fluctuated in value and often circulated at a sizable discount.

The first modern-style bank that was owned and operated by Chinese was established in 1897. By the Nanking Decade (1927–1937), Chinese modern banks were outstripping the foreign competition, in large part because of what has been called their "symbiotic relationship" with the Nationalist government.[8] After China regained tariff autonomy and control of its salt revenues in 1929, the Nationalist government opted to use the Chinese-operated, rather than the foreign-operated, banks as its depositories. During the early 1930s, too, the Nationalist government relied heavily on these banks for credit—a circumstance welcomed by the Chinese bankers because the effective yield was often 15 to 20 percent a year. During the Nanking Decade, therefore, the modern Chinese banks initially prospered, multiplying in both number and assets.

This hothouse growth did not produce a robust banking system, however, because the banks' excessive dependence on the government was good for the health of neither the economy generally nor the banks themselves. Because the banks granted a substantial share of their loans to the government (estimates range from 40 to 70 percent of total bank credits), they had relatively few assets left over to lend to the capital-starved private entrepreneurs. In fact, the total of all loans given by the Chinese modern banks to industrial enterprises in the early 1930s amounted to only 4 to 5 percent of their aggregate capitalization. These new-style banks, therefore, made a pitifully small contribution to China's industrial modernization.

The close links with the government, although highly lucrative, also proved to be the banks' undoing. In 1935, in a maneuver designed to halt the government's excessive dependence on private loans, Finance Minister H. H. Kung seized control of the nation's major banks. The result of this so-called Banking Coup of 1935 was that the government gained control of over 70 percent of the nation's banking assets. It also set the stage for the rampant inflation of the 1940s, which

proved so disastrous for the Nationalist government, because the government could obtain from the banks new and almost unlimited quantities of paper currency merely by issuing paper securities.

Steamboat Shipping and Railways

Commerce, of course, depends on transportation, and members of the foreign-merchant community were pioneers in promoting modern modes of transportation in China. Shipping in coastal and inland waters is a prerogative usually reserved for a country's own citizens. But China relinquished its monopoly of coastal shipping to the Americans in 1844 in the Treaty of Wangxia, and the other treaty powers gained that privilege through the ratchet-like escalation of the most-favored-nation clause. Subsequently, China also granted the foreign powers the right to trade on inland rivers, beginning in 1858 with a grant to the British to sail on the Yangtze.

Even before the legalization of interport trade by foreigners in the Treaty of Wangxia, however, foreign firms had not hesitated to ship goods in their own vessels from Hong Kong to the newly opened treaty ports. The fast-sailing Western ships easily outdistanced the pirates who then infested those waters, and the newly established foreign insurance companies would not provide coverage on goods sent by native junks. With the legalization of this shipping and then with the arrival of steamboats, foreign tonnage in Chinese waters greatly increased. Initially, this shipping had been undertaken by the trading firms themselves, but in 1862, the American firm of Russell and Company established the first foreign company (Shanghai Steam Navigation Company) that was organized expressly to engage in China's coastal shipping. In 1867 and 1868, two British-owned firms joined the competition. These and later foreign shipping companies were major tools in the opening of China to foreign trade, and the creation of each treaty port was usually followed closely by the opening of regular shipping service between it and Shanghai and Hong Kong. Foreign shippers also ventured into the interior of China, American-built paddle wheelers overcoming the perils of navigating up the Yangtze to Hankow by 1862 and even to Chungking by 1898.

Chinese actually contributed in major ways to the development of steam shipping in China. Although the first steamboat companies to engage in interport hauling were established by the Americans and British, Chinese compradores and merchants were often major stockholders. For example, in the largest of the early firms, the American-operated Shanghai Steam Navigation Company, Chinese probably held the majority of the shares. Most of the cargo carried by these foreign firms, moreover, was owned by Chinese merchants who recognized the advantages of security and speed offered by the foreign ships. As early as 1873, too, the powerful official Li Hongzhang organized the China Merchants' Steam Navigation Company, which soon became a major competitor of the foreign firms. Although this government-dominated company stagnated after 1883, Chinese-owned shipping continued to grow, and by the 1930s was challenging the foreigners' dominance.

Despite this growing competition from a modern technology, native junks persisted with a remarkably tenacity. Indeed, in the 1930s, they still conveyed over 80 percent of the total water freight. Although modern steamers generally dominated the traffic between the treaty ports, the supremacy of the junks outside the treaty-port system remained unchallenged, serving the domestic trade and acting as feeders to the foreign trade in the treaty ports. Because of the increased commercial activity in the twentieth century, moreover, the total number of junks operating in China's waters actually rose, perhaps by more than twofold.

Chinese accepted railroads less readily than steamboats. The first railroad in China was completed in 1876. With the arrogance typical of the foreign-merchant community at the time, the British firm of Jardine, Matheson and Company purchased a 12-mile stretch of land, parcel by parcel, from Shanghai to Woosung and built the railway line—without obtaining official Chinese approval. Local opposition was vehement, but trains began moving on the line in June 1876. Just two months later, the train struck and killed a Chinese. As a result of the furor that ensued, the imperial government bought out the British owners, and in November 1878 tore up the rails and discarded the rolling stock.

Chinese opposition to this railway and to railways generally between the 1860s and the 1880s was based partly on strategic considerations. Most officials in Peking feared that foreign armies could use trains to attack deeply and quickly into the nation's interior, thus undoing all their efforts to build up the nation's coastal defenses. They also feared—with the Taiping and Nien uprisings still etched deeply in their memories—that large numbers of transport workers would be put out of work by competition from the "iron roads," and thus forced into rebellion. Ordinary Chinese, too, were distressed that the railway tracks, the movement of the locomotives, and the stench of their engines would upset the balance of geomantic forces, with catastrophic consequences for both the living and the dead.

Despite such opposition, the pragmatic-minded governor-general of Chihli Province, Li Hongzhang, soon began constructing a railway from the coal mine at Tangshan to the docks near Tientsin. This 7-mile line was completed in 1880, and its manifest utility did much to still the criticisms of the conservatives. China also, of course, felt more comfortable when the railroad was planned and controlled by the Chinese government rather than by the inscrutable barbarians. Yet by the eve of the Sino-Japanese War (1894–95), the Chinese had laid a total of only 195 miles of track, and serious railroad construction did not get under way until after the war. Then in just eight years, 2,513 miles of line were laid, two-thirds of which was constructed by foreigners.

The foreign powers' interest in railroads was only marginally economic. After China's defeat by Japan, they expected the ramshackle empire to collapse, and their scramble for railroad concessions between 1895 and 1903 was motivated largely by the desire to demarcate areas that would fall into their control following the anticipated demise of the empire. This episode, a sordid tale of imperialistic greed that has been told many times in the political and diplomatic histories of the period, had the positive effect of bestirring the Chinese themselves to develop the nation's railways. Popular "national-salvation" movements promoted railroad

construction and led to the beginnings of a large number of rail lines, such as those proposed between Canton and Hankow, Hankow and Szechwan, and Soochow and Ningpo. Enthusiasm generally exceeded capability, however, and none of these lines came even close to completion before the dynasty fell in 1912. The imperial government, meanwhile, completed nearly 2,000 miles of track (including lines between Shanghai and Nanking and between Tientsin and Pukow), as compared with just 401 miles of track constructed under popular auspices. By 1911, China had a total of 5,800 miles of railway, 41 percent of which was owned by the foreigners.

During the next twenty-five years, until the beginning of the war with Japan in 1937, nearly 6,800 miles of additional track were constructed, for a total of 12,600 miles. However, almost half of China's total railway mileage lay in Manchuria; just 7,300 miles of railway served China proper. The foreigners' share in the ownership of these lines south of the Great Wall had fallen by 1937 to about 35 percent.

The motives that led to this expansion of the railways were primarily political: the foreign powers used the railroads as a means of staking out territorial claims in China, and later the Nationalist government viewed railroads as an instrument of forging national unity. From the outset, therefore, the economic benefits of the railroads were regarded as of secondary importance.

One economic activity that was revolutionized by the introduction of the railways, however, was coal mining. At least as early as the Tang Dynasty, Chinese had used coal for cooking and in such industries as iron smelting and ceramic- and glassmaking. But the costs of transporting such a heavy, low-value-per-unit commodity as coal by traditional means were nearly prohibitive. Coal, therefore, was traditionally used in places remote from the mines only in the most exiguous amounts.

Following the introduction of railroads, it became economical to ship coal over long distances. Like Li Hongzhang's Tangshan line, several of the railways, especially branch lines, had been designed primarily to move coal from the mines to the industrial centers. The result was to cut the cost of shipping coal to about one-fifth of that in the 1870s. This gave an enormous fillip to the coal industry, output of large mines (there exist no reliable data for small mines) increasing from 1896 to 1936 by a factor of sixty. During the early twentieth century, therefore, it became feasible to use coal extensively in manufacturing and as the principal source of industrial power.

Railroads also contributed to modern industry by serving as the major supply lines for the raw materials used in the production of consumer goods. Approximately 90 percent of the raw materials used by China's consumer-goods industries, which constituted the overwhelmingly largest part of the industrial sector as a whole, were agricultural in origin.[9] And over 60 percent of those raw materials were delivered to the industrial centers by rail. Clearly, the railroads were of signal importance to industrial production.

But the economic benefits of railroads within China proper were largely limited to the modernizing sector. Modern industry and mining in the 1930s still

accounted for only 2.95 percent of the net domestic product, however; thus the impact of railroads on the economy as a whole, as transmitted through manufacturing and mining, could not have been large.

Some writers, it is true, have argued that railroads did substantially benefit the agricultural sector, contending that railroads stimulated peasants' involvement in the market economy and consequently led to increases of farm output. The data, however, simply do not bear out these claims. No more than 4 to 7 percent of all marketed agricultural goods, for instance, was transported by rail. And agricultural produce accounted for only 12 to 15 percent of the railways' total tonnage during the 1930s. Some regions that specialized in industrial crops, such as tobacco in parts of Shantung or cotton in parts of Hopei, no doubt benefited considerably from the availability of this relatively cheap, safe, and prompt form of transportation. Judging from the quantities of farm produce transported by rail, however, those regions were not extensive.

Two factors imposed limits on the economic payoff of the railroads. First, the railway system was sparse. A glance at a map reveals that the 7,300 miles of track within China proper in 1937 traversed only a small number of the approximately 1,500 *xian* south of the Great Wall. In fact, railroads in 1937 constituted only about 2.4 percent of all land routes in the country (including Manchuria).[10] Second, most of the railroads constructed south of the Great Wall were redundant of existing trade routes. This was especially true in central and south China, where junks and steamers carried freight on the elaborate network of water routes at prices that were competitive with those of the railroads. Even in north China, much of the rail system was simply superimposed on existing water routes.[11]

Nor did the Chinese economy even benefit from the backward-linkage effects of railway construction, which had been so beneficial to the producer-goods industries in western Europe and the United States. This was because China lacked the iron, steel, and heavy-machine industries that could produce locomotives, rolling stock, tracks, and bridge materials in the quantity and of the quality demanded. Thus only 30 percent of China's expenditures for railway-related industrial goods between 1895 and 1916 was spent in China; the remaining 70 percent was spent on imports from abroad. And of the 1,244 locomotives purchased from 1897 to 1930, only 58 had been manufactured in China; the rest had been made in England, Germany, France, Belgium, and the United States. The result was that foreign industries, not China's, received the strongest boost from Chinese railway construction.

In Manchuria, however, in contrast to the experience south of the Great Wall, railroads did contribute appreciably to economic development. In that vast, underdeveloped, and underpopulated region, railways quickly extended beyond the preexisting transportation networks. There they made possible the exploitation of the forests of the north, the development of the rich coal and iron mines, and the shipment of soybeans and bean products, which by the late 1920s had become China's major export. They also facilitated the large migrations into the region from Hopei and Shantung. After 1931, of course, Manchuria contributed less to the economy of China than to that of Japan.

Table 8.3. Estimated[a] Number and Capitalization of Foreign-owned Industries in China in 1894[b]

Type of Firm	Number	Capital (Ch$)
Shipyards: construction and repairs	12	4,943,000
Tea processing	7	4,000,000
Machine silk reeling	7	3,972,222
Processing of exports and imports (other than tea and machine silk)	19	1,493,000
Other light manufacturing	39	3,793,000
Electric power and waterworks	4	1,523,000
TOTAL	88	19,724,222

[a]Table is based on incomplete data.

[b]Includes a small number of firms based in Hong Kong.

Source: Albert Feuerwerker, "Economic Trends in the Late Ch'ing Empire, 1870–1911," in *The Cambridge History of China*, vol. 11, ed. John K. Fairbank and Kwang-ching Liu (Cambridge: Cambridge University Press, 1980), p. 29. Reprinted by permission.

Foreign Manufacturing

Before the signing of the Sino-Japanese Treaty of Shimonoseki in 1895, foreigners had no legal right to establish manufacturing enterprises on Chinese soil. Nonetheless, foreigners, even before that date, had started various forms of manufacturing in support of their commercial goals. An estimated 103 foreign-owned factories had operated in China before 1895 in defiance of the law.

The first foreign manufacturing firms were ship-repair yards. The number of foreign ships coming to China increased steadily after the Opium War—by 1865, some 16,000 entered the treaty ports in any one year—and they were often in need of repair following long ocean voyages from Europe or America. Initially, the foreigners relied on Chinese firms for repairs, but they had no confidence in Chinese workmanship unless supervised by a knowledgeable foreigner. It was one of these foreign overseers who, sometime between 1845 and 1856, established the first foreign dockyard in China. Other shipyards were soon established (usually by the English), although the first large-scale one, Boyd and Company, was not established in Shanghai until 1863. Before 1895, shipbuilding and repair was, in terms of total capital, the largest foreign-owned industry in China (See Table 8.3).

To facilitate their commercial ventures, foreign merchants also began to process Chinese raw materials for shipment back home. The costs of transporting goods to Europe and America were high, and the advantages of processing the Chinese materials in at least a preliminary form prior to export were obvious. Russian tea merchants, beginning with a plant in Hankow in 1863, were the first to establish factories for the processing of exports. Merchants from other countries soon were refining wool, hides, eggs, sugar, tung oil, and vegetable oils in preparation for shipment. Gradually, the foreigners in China also began to manufacture goods for consumption in China. Some of these commodities were intended primarily for the use of foreigners in the treaty ports: Western drugs (production began in 1853), bread and candies (1855), beer (1864), ice (1880), glass (1882), furniture (1885), and cement (1891). Other foreign factories, taking advantage of China's cheap labor, began to manufacture goods for Chinese consumption in competition with imports from abroad. Matches (production began in 1880), cigarettes (ca. 1902), light bulbs (ca. 1911), metal nails, paper, soap, gramophones, and vacuum bottles were some of the other industries started by foreigners in China.

The largest foreign industry was cotton textiles. Both British and American merchants had planned to establish textile mills in Shanghai and Tientsin in the 1860s, but Chinese opposition forestalled foreign entry into the industry until after the signing of the Treaty of Shimonoseki. By 1913, eight foreign cotton mills (run by British, Japanese, Americans, and Germans) were operating in China, with a total of 345,000 spindles and 2,000 looms. By 1936, those numbers had risen to 2.5 million spindles and 33,000 looms—accounting for only 29 percent of the yarn produced by modern factories in China, but 64 percent of the cotton cloth.

A significant trend in the foreign-owned textile factories during and after World War I was the growing preponderance of the Japanese. By the mid-1930s, the Germans and Americans had long since dropped out of the competition, and British-owned mills ran only 4 percent of the spindles and 7 percent of the looms in China. The Japanese, in contrast, had invested heavily in new equipment so that their mills not only were more efficient, but also dominated the production of high-count yarns—leaving the production of low-count yarns to the relatively antiquated mills owned by Chinese and British.

Foreign industrialists enjoyed significant advantages in China that were denied their Chinese rivals. They were protected in their treaty-port sanctuaries from Chinese governmental interference and squeeze—a factor that, as we will see, was of no small value. They had easier access to the technologies and engineering know-how of the West. And they could obtain loans from foreign banks easily and at relatively low rates of interest, while Chinese industrialists were chronically short of capital. By 1933, therefore, foreign-owned firms were producing more cotton cloth, cigarettes, coal, and electric power than were Chinese-owned facilities. And they controlled fully 63 percent of all industrial capital in the country (including Manchuria).

Chinese manufacturers, however, enjoyed advantages of their own in competition with the foreigners. They were more knowledgeable about local conditions: they knew consumer needs, were familiar with Chinese marketing practices, and could pursue claims against suppliers and debtors more effectively than could the culture-bound and often treaty-port–bound foreign industrialists. The rising tide of nationalism during the early twentieth century, too, led to the antiforeign boycotts and the movements to "Buy Chinese," which put the foreign manufacturers at an "unfair" disadvantage. Despite a slow and halting start during the latter half of the nineteenth century, and despite the higher capitalization of their foreign rivals, Chinese-owned modern factories by the 1930s were outproducing the foreign-owned factories in China proper, in terms of value-added, by a ratio of almost four to one.

Chinese-Owned Modern Industries

The Initial Stage

The Chinese had been slow to emulate the Westerners' industrial model. Even after the defeat in the Opium War, they remained blissfully convinced of the superiority of Chinese ways and deprecated virtually everything foreign. Thus they hunkered down and hoped that this nasty business with the foreigners would go away. It would not, of course, and in 1860, the Europeans used their modern arms to occupy Peking, burn the Summer Palace, and force the emperor to take refuge in Jehol, in southern Manchuria. Further demonstration of the superiority of the Westerners' military technology was provided during the Taiping Rebellion by the Ever-Victorious Army, led by Frederick Townsend Ward and Charles "Chinese" Gordon, which showed that Chinese troops, when armed with Western guns, were more than a match for domestic rebels.

It was, therefore, the military effects of the West's Industrial Revolution that first caught the attention of the Chinese. Soon a small cadre of high-level officials, led by Zeng Guofan, Zuo Zongtang, and Li Hongzhang, established dockyards and arsenals to construct modern gunboats and to produce Western-style guns and ammunition. The initial attempt to apply Western technology to the manufacture of weapons was undertaken by Zeng Guofan when in 1862, he established the Anqing Arsenal in Anhwei during his efforts to suppress the Taiping rebels. He and Li Hongzhang later launched a more grandiose project when they established the famous Jiangnan Arsenal in Shanghai in 1865. Using imported equipment and materials, this arsenal was soon manufacturing its own tools and machinery, and in 1868 launched its first modern gunboat. Li established a similar arsenal in Nanking in 1866; between 1867 and 1874, it built fifteen ships, the largest of which was 280 feet long. These ventures initially appeared to be a grand success, the *North China Herald* observing even as early as 1866 that Li Hongzhang's arsenals "for extent may vie with those of the most powerful nations of Europe," possessed as they were of "enormous magazines" and "vast numbers" of weapons.[12] But these military factories never fulfilled their early promise. The quality of the guns and ships they produced was disappointing. And the costs of production far exceeded the price of imported weapons and ships, largely because most of the materiel had to be purchased abroad and because the Chinese mandarins and the foreign employees in the factories drew excessively high salaries. Never really able to compete with their European counterparts, these arsenals by the twentieth century had fallen woefully below international standards.

By the 1870s, Li Hongzhang realized that modern guns and ships were merely surface manifestations of the Westerners' strength and that the true source of national power lay in economic wealth. "China's chronic weakness," he declared, "stems from poverty."[13] On this premise, he inaugurated a remarkable series of nonmilitary industrial ventures. Li had been perturbed by the large profits that foreigners were drawing from their growing domination of China's interport shipping. Hopeful of stanching this flow of China's wealth to the foreigners, he established in 1873 China's first steamship company, the China Merchants' Steam Navigation Company.

The formation of this company led logically to other industrial innovations. In 1877, he opened the Kaiping Coal Mines, near Tientsin, which provided fuel and cargo for the China Merchants' ships on the return trip to Shanghai (the ships having brought tribute rice from Shanghai). And in 1878, he constructed the 7-mile railway to transport coal from the mines. Other undertakings begun by Li included a copper mine (1881) and gold mine (1887), as well as several iron and coal mines using Western machinery. In 1879, he established China's first domestically owned telegraph line (British and Danes had connected Shanghai by cable to Hong Kong, Vladivostok, and Japan as early as 1870 to 1871), a cotton-spinning factory in 1882, and a cotton-weaving mill in 1890.

Although Li Hongzhang was far and away the most enterprising supporter of industrial ventures in the 1870s and 1880s, a scattering of other provincial officials also launched a number of nonmilitary industries. Zhang Zhidong, governor-general first in Kwangtung–Kwangsi (1884–89) and then in Hunan–Hupei (1889–1907), established cotton-textile mills, silk factories, tanneries, iron and coal mines, and the Hanyang Ironworks (which later became famous as the Hanyeping Coal and Iron Company). Other provincial authorities in Hupei and even faraway Kweichow also established a number of textile mills, match factories, and ironworks.

The form of organization used by Li Hongzhang in most of his industrial ventures was known as *guandu shangban* ("official-supervision, merchant-management"). This was a hybrid device that merged the brokerage concept of administration (chapter 6) with the Westerners' institution of joint-stock companies. It enabled Li to solve the problem of how to establish these enterprises when the potential investors—China's merchants—lacked the needed initiative and the government lacked the needed capital. He therefore provided the initiative himself, using in large part the merchants' money. Of the modern enterprises established during the late Qing period, only about a dozen were formally regarded as *guandu-shangban* operations. "But the essential ingredients of the kuan-tu shang-pan pattern were to be found in virtually every industrial or commercial undertaking organized by Chinese promoters before the end of the Ch'ing dynasty."[14]

The China Merchants' Steam Navigation Company was a typical *guandu-shangban* enterprise. As the promoter of this undertaking, Li was the ultimate authority over it and protected it from the exactions of corrupt and unfriendly officials. He was also an important shareholder, investing 50,000 taels of his own money, and he lent the company an additional 135,000 taels, at interest, from official funds that he controlled. The day-to-day operations of the firm were directed, however, by a former comprador, who served as general manager. Nominally, the company was owned by the shareholders, most of whom were also compradors, who provided 110,000 taels of the original investment. The economic risks were completely theirs. "Profit and loss," Li remarked, "are entirely the responsibility of the merchants and do not involve the government."[15] But the merchants had little, if any, control over the management of the firm. The concepts of shareholders' meetings and boards of directors were alien to China, and the level of official involvement was high. A final feature of the company, com-

mon to all *guandu-shangban* enterprises, was a monopoly franchise to help get the company going—in this case, an assurance that it would transport at least 20 percent of the tribute rice sent by the government each year from central to north China.

Beginning in the mid-1880s, a subtle but significant change occurred in the *guandu-shangban* enterprises, because, although the term *guandu shangban* persisted, actual management of these firms fell into the hand of bureaucrats. The first managers had been merchants with purchased official titles and ranks. They had been merchants first and officials second. The managers who took charge of the *guandu-shangban* enterprises after the mid-1880s, such as Sheng Xuanhuai and Zhang Yenmou, tended to be officials first and merchants second. These official-managers had no entrepreneurial experience, received salaries regardless of the level of company profits, and were habituated to a work style markedly different from that in the business world. *Guandu-shangban* enterprises, as a result, soon acquired the organizational traits typical of government bureaus: inefficiency, incompetence, corruption, and disregard for the interests of the shareholders. For a merchant-shareholder to protest to an official-manager, wrote one investor, was "like striking rocks with eggs. Truly we can do nothing." Merchants consequently lost confidence in the *guandu-shangban* enterprises, which thereafter withered for want of private investments or became an even greater burden on the revenues of provincial governments.[16]

Meeting distrust and enmity from the merchant community, official patrons of new enterprises after the late 1880s sought forms of organization that would be more attractive to potential investors. They conjured up numerous new guises, the most common of which was *guanshang hoban* ("official-merchant joint management"), a term that seemed to promise an equal partnership between the officials and the merchants. The first of these was the Kweichow Mining and Iron Works, organized by the provincial governor in 1886. The governor-general of Hunan–Hupei, Zhang Zhidong, who next to Li Hongzhang was the most prominent industrial promoter in the late Qing period, also employed this cosmetic formulation in his several enterprises. The *guanshang-hoban* ventures proved to be no different from the *guandu-shangban* enterprises, however, because the state and the officials invariably overawed and overshadowed the merchants.

During this formative period of China's modern industry, only a few purely private enterprises were established. In 1883, the comprador Zhu Dachun successfully established a machine factory in Shanghai; later, he also started textile, flour, paper, and rice mills. The most famous success story was that of the Rong family, which, starting with a small flour mill in Wusih in 1901, had built a considerable empire of textile factories and flour mills by the 1930s. Pitifully few such private ventures succeeded, however, and those that did flourish were small in scale. The Rong's first cotton mill, for example, was launched with a capital of only 30,000 taels, as compared with over 350,000 taels raised to start the Huasheng Spinning and Weaving Mill in 1881, which was a *guandu-shangban* enterprise. Private promoters, acting on their own, could rarely attract much capital. The concept of joint-stock companies had still not gained popularity, and the private ventures

lacked the prestige needed to overcome the potential investors' suspicion of such a strange idea. Moreover, by contrast with patrons of *guandu-shangban* companies, private firms were unable to ensure protection for their enterprises from official exactions.

Wealthy Chinese were, to be sure, looking for investment opportunities—as evidenced by the fact that fully 40 percent of the capital invested in the so-called foreign-owned firms in China in the late nineteenth century was actually provided by Chinese investors. But Chinese, knowing the officials' penchant for squeeze, feared for the security of their investments if placed in Chinese firms. "The major problem in China's economic development was not the lack of capital, but the lack of trust on the part of the investors toward bureaucrats."[17] Virtually everyone, therefore, merchants and officials alike, recognized that a large-scale industrial undertaking could succeed only if officials were participants in it. But therein lay a dilemma, because official involvement was invariably followed by official control, and official control usually resulted in debilitation of the enterprise.

After 1899, however, Zhang Jian and a few other industrial promoters discovered an alternative to official control. Zhang was that rarest of creatures: a preeminent scholar who scorned an official career to engage in business. In 1894, he had placed first among all *jinshi* graduates in that year's metropolitan examination. This achievement assured him a brilliant and remunerative bureaucratic career. After serving in the Hanlin Academy for less than a year, however, he resigned from government service and became an industrial entrepreneur. His first undertaking was the Dah Sun (Dasheng) Cotton-Spinning Mill, started in 1899 with a capital of one million taels, in his native city of Nantong, near Shanghai. Later, he created a veritable industrial complex in Nantong by adding a flour mill, an oil mill, a shipping line, a distillery, and a silk filature.

The secret of Zhang Jian's success was that because he was primarily a private entrepreneur rather than a bureaucrat, he was committed to efficient, profit-making management; yet because he was also a prestigious scholar, he possessed the status that enabled him to cultivate friendships with powerful officials, such as Governors-General Zhang Zhidong and Liu Kunyi, and to procure large loans and investments from the government without having to surrender control of the enterprises to the bureaucrats. Zhang Jian's successes were outstanding among China's early industrial ventures, but he was also representative of a small number of officials and one-time officials who during the last decade or so of the dynasty placed a higher value on entrepreneurship than on bureaucratic success. (Another prominent example was Zhou Xuexi, who developed and ran a large mining operation and the famous Chee Hsin [Qixin] Cement Company.) Their careers reveal how radically social values were changing during the waning days of the dynasty; yet their experiences also demonstrated that official status and connections were invaluable to the success of a sizable industrial undertaking.

Official involvement in industrial enterprises came under sharp challenge during the "rights-recovery movement" between 1903 and 1911. The Chinese Imperial Railway Administration, headed by Sheng Xuanhuai, had relied heavily on foreign loans to finance railway construction. When a wave of antiforeignism swept

the country in the early years of the twentieth century, many Chinese expressed the fear that the government was selling out to foreign interests by granting monopoly rights and economic concessions in return for the railroad loans.

In response to the swelling popular sentiment, the government revoked the concessions that it had granted to the foreigners in return for constructing the Canton–Hankow and Shanghai–Ningpo railways. At the same time, it issued charters to nineteen private Chinese corporations to construct railways untainted by foreign funds. To finance the new "popularly owned" *(minye)* Canton–Hankow line, Cantonese leaders of the rights-recovery movement sold shares at such low prices that virtually any supporter of rights recovery—even laborers and students—could purchase them. One share cost only Ch$5, which could be paid in installments over an eighteen-month period. This plan of mass financing proved to be successful beyond anyone's dreams. With subscriptions pouring in from overseas Chinese as well as from the provinces, the company raised some Ch$40 million (about 30 million taels)—double its initial goal—in just four months. Managers of the Shanghai–Ningpo line imitated this scheme and quickly raised Ch$13 million. (These endeavors contrasted sharply with those of other private industrial firms that attempted to raise capital solely by eliciting large investments from the merchant community. Zhang Jian managed to raise 1 million taels for the Dah Sun Company, for example, but only with great difficulty.)

The successes of the Canton–Hankow and the Shanghai–Ningpo railways in fund raising were not matched, however, by operational achievements. The "popularly owned" corporations, it soon became clear, were no less subject to gross mismanagement than were the state-controlled ventures: the corporations' managers let bids at high prices to engineering firms in which they held an interest; embezzlement was rampant; and construction of bridges and other line work was done shabbily. In 1911, when the Qing government nationalized the nation's railways, only 45 of the projected 650 miles of track on the Canton–Hankow line had been completed. The other "popularly owned" railways had been plagued by even greater difficulties, and their achievements were even less notable. Nonetheless, when the imperial government attempted to reestablish its control over these railways, public resentment was so strong that the resulting political protest contributed significantly to the overthrow of the dynasty.

When the dynasty fell in 1912, China could boast of the beginnings of a modern industrial sector. During the initial gestation period, 1865 to 1895, nineteen government arsenals and shipyards and about seventy-five other manufacturing firms had been established by Chinese in all of China. During the next seventeen years—motivated partly by a nationalistic desire to strengthen the nation, and even more by the prospect of substantial profits—private and semigovernmental entrepreneurs established approximately 500 modern industrial plants.

The Golden Age

The golden age of Chinese industry was between 1914 and 1922. After the outbreak of World War I, European industrialists stopped producing for export and concentrated on meeting their own nations' war needs. Japanese yarn exports to

China also fell by 65 percent between 1914 and 1919. As a consequence, foreign competition with China's factories virtually disappeared. At the same time, European demand for Chinese goods—such as strategic ores (tin, antimony, and tungsten), silk, wool, and egg products—increased sharply. Another factor that favored Chinese industry was the increase in freight charges for ocean shipping, which in 1918 and 1919 were some ten to twenty times higher than they had been before the war. Whatever foreign imports did reach the Chinese market, therefore, were available only at exorbitant and often uncompetitive prices—the high shipping costs having the same effect as a protective tariff. The high cost of shipping also dictated that Chinese exports of raw goods, such as vegetable oils and mining products, be more thoroughly cleaned and refined than before, thus greatly stimulating the processing industries. Many of China's industrialists consequently earned unprecedentedly large profits during the Great War.

Even two to three years after the war, the Western nations, now engaged in postwar reconstruction, continued to be big buyers of China's raw and semimanufactured goods, yet they continued to produce largely for their own use. Another factor that favored Chinese industry was the development in China of an antiforeign economic-boycott movement. The first boycott had been organized in 1905 as a protest against America's exclusionary, anti-Chinese immigration policy, followed in 1908 by an anti-Japanese boycott. These economic boycotts became a common means by which Chinese patriots expressed their anger at the foreign powers. Indeed, during the May Fourth Movement (1919) and the emotionally charged years of the 1920s, the boycott of foreign goods and the corresponding call to "Buy Chinese" became semipermanent features of the economic landscape.

Yet China's industrialists were unable to take full advantage of the hothouse atmosphere during and after the Great War, because they could not expand their plants quickly enough to satisfy the potential market. Textile manufacturers, for example, could not purchase the looms, spindles, motors, and other capital equipment needed to increase output. This was because foreign suppliers had converted to war production, and Chinese machine factories still lacked the expertise needed to produce such sophisticated equipment. Chinese industrialists actually placed large orders for European equipment as early as 1916 and 1917, but the new equipment did not reach Chinese docks until 1921 and 1922. Then, however, the industrial plant grew rapidly. During just those two years, thirty-nine textile mills opened. Indeed, the growth of industry during this golden age is suggested by the increase in total spindles, Chinese- and foreign-owned combined, from 866,000 to 3 million between 1914 and 1922 (a gain of 317 percent), and in the total number of looms from 4,800 to over 19,000 (300 percent). Most of that growth came during the latter years of the period. These rates of increase were then the largest in the world.

During the golden age, the industrial sector began to mature, as evidenced by two significant departures from previous practice. First, imports of consumer goods, especially cotton goods, declined, while imports of producer goods sharply increased (accounting in 1920 for 29 percent of all imports). Although the composition of imports and exports suggests that the Chinese economy was still "unde-

veloped," it was clearly being restructured, indicating a shift to the stage of early industrial growth. Second, industrial development was promoted largely by private entrepreneurs, who had served neither as government officials nor as compradors with foreign firms. It appears, therefore, that the impotence of government during the early Republican period—the warlord period—had the wholesome effect of lessening bureaucratic intervention in the economy.[18]

An industrial crisis beginning in late 1922 marked the end of the golden age. The causes of the crisis were complex: a severe shortage of domestic raw cotton as a result of a poor harvest in 1921 to 1922; the high price of raw cotton on the world market; the fall in the world price of silver, which devalued China's currency; and no doubt, the return of foreign competition as European and American factories completed their reconversion to peacetime production and reentered the international markets. The crisis was short-lived, however, a bumper cotton harvest in the fall of 1925 bringing cotton prices down, and another antiforeign boycott increasing the domestic demand for Chinese goods. Thereafter, China's industry resumed its growth, albeit at a lower rate than during the golden age[19]

The Nanking Decade

A new phase of governmental involvement in the industrial sector began after the establishment of Nationalist rule in 1927. The government of Chiang Kai-shek, in accordance with the writings of Sun Yat-sen, was ideologically committed to economic modernization. And industry in China proper did continue to develop impressively from 1931 to 1936, growing at an annual rate of 6.7 percent. This increase has been attributed to such "growth-inducing measures" of the Nationalist government as attaining tariff autonomy, abolishing the *likin* transit tax, and reforming the currency.[20]

These measures did little, however, to promote industrial growth. The likin, for example, was generally replaced by such euphemistic substitutes as a "special consumption tax." Frequently, too, Nationalist policies obstructed industrial development. The government throughout the 1930s was primarily concerned with the military tasks confronting it. As a result, it invested few resources and little effort in programs of economic development and borrowed heavily to finance its various military undertakings. With the government absorbing more than 40 percent of the nation's bank loans during the 1930s, industrial loans could be obtained only at a premium, often at interest rates of 18 to 20 percent a year. These were rates that "most Chinese industries were unable to pay; as a result, industrial activity was turned into speculative ventures."[21]

Moreover, because Nationalist control of the rural areas was weak, the central government in 1928 surrendered the revenues from the land tax to the provincial governments, despite the fact that the agricultural sector produced most of the national product. Commerce and industry were more easily taxed, and the Nanking government derived its tax revenue almost entirely from three indirect taxes: the customs tariff, the salt tax, and the so-called Consolidated Taxes—excise taxes levied at the place of origin on such commodities as tobacco, flour, cotton yarn,

matches, cement, and liquor. Because the government was hard-pressed for revenue, the burden of taxes was sometimes ruinous for the industrialists. During the first three years of Nationalist rule, for instance, two-thirds of Shanghai's 182 Chinese-owned cigarette manufacturers went out of business because, according to the owners, of excessive taxes. As one cigarette manufacturer complained in 1930, "Taxation is more than five times what it used to be. . . . We have been unable to increase our prices because, every time we increase them, the Government, who has promised to do everything to encourage Chinese trade, has hampered us by imposing heavier taxation."[22] By 1937, even Nanyang Brothers, the largest Chinese-owned cigarette firm, succumbed. Staggering from a 38.7 percent tax on its gross income, the owners surrendered control of the company to Chiang Kai-shek's brother-in-law, T. V. Soong.

Foreign-owned companies, because of their political clout, often avoided these crushing taxes. In 1935, the combined cost of taxes and interest on a bale of yarn for a Chinese-owned mill was Ch$15, whereas the cost for a Japanese-owned mill was only Ch$2.70.

For all these reasons, it is doubtful that the industrial expansion during the 1930s, was attributable in substantial degree to the Nationalist government's "growth-inducing measures." Indeed, because industrial production grew at a generally constant rate from 1912 to 1937, except during the especially prosperous years of 1914 to 1922, one suspects that economic modernization—electrification, factory production, railroads, foreign trade—had acquired such a momentum that the modern sector was growing almost irrespective of political regimes or policies.

A possible exception to this negative assessment of the Nationalists' policies toward the industrial sector was the Three-Year Plan of Industrial Development, begun in 1936, under the direction of the National Resources Commission. This commission was a secret agency under Chiang Kai-shek's National Military Council, and the purpose of the Three-Year Plan was to create an industrial base in the interior that would enable the country to wage a major war against Japan without dependence on foreign supplies. The plan envisioned the creation of ten major industrial and mining works, ranging from coal, iron, copper, lead, and zinc mines, to a coal liquification plant, chemical and electrical works, a steel mill, and a machinery factory. By contrast with China's existing industrial plant in the large coastal and riverine cities, these projects would constitute an "internal economic center" in Hupei, Hunan, and Kiangsi provinces, where, it was hoped, they would lie outside the reach of Japanese aggression. Germany played a key role in the plan. From the plan's inception, German experts served as advisers to the National Resources Commission, and German industrial firms were to supply all the equipment for the ten projects, including machinery for entire mines and factories. China would pay Germany for these goods through a barter arrangement, sending metal ores, especially tungsten, which German industry needed to produce high-quality steel.

The National Resources Commission's preliminary work of contracting for materials and training personnel had proceeded quickly and with no evidence of corruption, and thus the auguries for the Three-Year Plan were favorable. But

assessment of the new industrial strategy is difficult because war broke out after the first year, and the Japanese soon overran most of the area where the mines and plants were to be located.

If the war aborted the Nationalists' Three-Year Plan, however, it may also have saved China's private factories from being taken over by the state. For in the 1930s, Chiang Kai-shek's economic planners were deeply impressed by the seeming advantages of a "planned economy," as was then being implemented in the Western dictatorships. They aspired, therefore, to bring all industry under governmental control. "Had things gone according to plan," recalled an official of the National Resources Commission, "all industry would have been managed by the state *[guoying]*."[23]

The Wartime and Postwar Industries

How China's industries would have fared if the war with Japan had not erupted can only be speculated. In the event, both private and government-sponsored industries in Nationalist China suffered severe setbacks during the war years, 1937 to 1945. The Japanese invaders quickly occupied the major cities in east China, where the bulk of China's modern industry was located, and the government retreated to the mountainous interior in the west. This area—comprising all or parts of Szechwan, Yunnan, Kweichow, Kiangsi, Hunan, Shensi, and Kansu—was almost untouched by modern life. When the war began, the whole region, with some three-fourths of the nation's territory, could claim only about 6 percent of the nation's factories. Anticipating a long war of attrition, the Nationalist authorities removed arsenals, airplane-assembly plants, steel mills, and other war-related industries to the interior. Transportation was difficult and perilous—hundreds of trackers, for instance, were often needed to pull a heavily loaded boat through the swirling waters in the Yangtze Gorges—yet equipment from 639 factories was relocated in west China. Some 42,000 skilled laborers joined this mass industrial migration. During the initial years of the war, moreover, industry boomed in Nationalist China, numerous factories were established, and industrial production nearly quadrupled between 1938 and 1943.

Still, the industrial base in west China had been small, and total industrial output in unoccupied China never exceeded 12 percent of the pre-1937 levels. Beginning in 1943, moreover, crisis struck. The Japanese blockade and bombing, inflation, deteriorating machinery, and impoverishment of the people all took a toll. As a consequence, 56 percent of the factories closed between 1942 and 1944. When the war ended in August 1945, industry in Nationalist China was verging on total collapse.

But industry in Nationalist-controlled China represented only a part, and much the smaller part, of China's total industrial base during the war years. Large areas were occupied by the Japanese; Manchuria, for example, which had fallen to the Japanese in 1931, is larger than Germany and France combined. Although this region since 1932 had ostensibly been governed by the independent state of Manchukuo, the Japanese army dominated industrial policy. The Japanese goal was to

Table 8.4. Indices of Industrial Production in Occupied China

Year	Shanghai	North China
1936	100.0	*
1937	85.5	*
1938	74.9	*
1939	138.6	100.0
1940	154.8	121.0
1941	137.8	138.0
1942	—	148.0

*Data not available.

Source: Yu-Kwei Cheng, *Foreign Trade and Industrial Development of China: An Historical and Integrated Analysis Through 1948* (Washington, D.C.: University Press of Washington, D.C., 1956), p. 116. Reprinted by permission.

establish a planned economy, with an industry that would support its military pretensions throughout Asia. Thus in contrast to most colonies, which served as suppliers of raw materials to and markets for the finished goods from the mother country, Manchuria developed into a base for heavy industry. The railway and highway mileage were quickly doubled, and the Japanese conquerors invested heavily in the mining of iron and coal, the generation of electricity, and the production of iron, steel, machinery, and chemicals. Progress was rather slow before 1936, when a Soviet-style five-year plan was instituted; thereafter, development of Manchuria's industrial plant advanced at a furious pace. The annual growth of these basic industries was about 14 percent, which resulted in a total increase of five and a half times between 1931 and 1945—a growth rate unequaled anywhere except in the Soviet Union during the 1930s and in the United States between the depths of the Depression in 1932 and the development of a full war economy in 1943. By 1944 to 1945, therefore, Manchuria was producing eight and a half times as much pig iron as China proper had produced in any peak year, two and a half times as much electrical power, and eight and a half times as much cement.

In China proper, the Japanese also occupied large parts of north and east China after the war began in July 1937. There, much of the industry was destroyed or damaged in the early phase of the war. In Shanghai, fighting devastated 52 percent of the industrial plant, and in the Nanking and Wusih areas of the lower Yangtze Valley, destruction rates ran to between 64 and 80 percent. The Japanese nonetheless worked quickly to restore industrial production, for they viewed this part of China as a vast supply area of raw materials and semifinished products that would feed the advanced industries of the Japanese home islands. As early as 1939, therefore, industrial output was pushed to unprecedented heights (Table 8.4).

As in the Nationalist-held area, industry in Japanese-occupied China suffered severely from the fortunes of war. Especially after 1943, when the Allies assumed the offensive against Japan, industrial production fell precipitously. As United

Table 8.5. Summary of Damage to Basic Manchurian Industry

Industry	Percentage Reduction in Productive Capacity
Electric power	71
Iron and steel	51–100
Metal working	80
Non-ferrous mining (coal excepted)	75
Liquid fuels and lubricants	65
Cement	50
Chemicals	50
Textiles	75
Paper and pulp	30
Radio, telegraph, telephones	20–100

Source: Francis C. Jones, *Manchuria Since 1931* (London: Royal Institute of International Affairs, 1949), p. 229. Reprinted by permission.

States submarines decimated Japan's merchant fleet, supplies of industrial materials became critically short and the shipment of finished goods even along coastal routes was hampered. As in the Nationalist areas, too, the rising spiral of inflation discouraged industrial investments. When the war ended, industrial output was a mere 25 percent of the prewar levels.

In Manchuria, which had become the major industrial center in East Asia outside Japan itself, the greatest war losses were incurred after V-J Day. The Soviets, having occupied the area late in the war, declared in December 1945 that all Japanese industrial enterprises were "war booty" of the Soviet Union. During the following months, they stripped Manchuria's factories of all the newest equipment, including power generators, motors, and other heavy machinery. Much of what was left behind had been wantonly damaged by the Russians' removal crews. Local Chinese also vandalized the factories, often stealing machinery and even wood for fuel. When the Chinese reoccupied Manchuria in 1946, they found substantial quantities of antiquated machinery still there, but the productive capacity of Manchuria's industry had been seriously crippled (Table 8.5).

A major development during the Nationalist period, which had a crucial impact on the political as well as the economic situation at the time, was the increasing involvement of the government in industry. Critics of the government referred to this policy as "bureaucratic capitalism," a pejorative term connoting that Nationalist officials were enriching themselves by improperly using their offices and influence to engage in industrial and commercial enterprises and to drive private entrepreneurs out of business.

The rise in government ownership of industrial enterprises since the mid-1930s had indeed been remarkable. In late 1936, after nearly a decade of Nationalist rule, government factories still accounted for only about 10 percent of the investment in Chinese-owned industry. By 1944, that figure had risen to 50 percent, and by 1946 had reportedly increased to 70 to 80 percent. During the war with

Japan, the Nationalist government attempted to create an industrial base in west China, emphasizing particularly those industries that contributed to the war effort. Government predominance in this effort was inevitable, because few private entrepreneurs were capable of relocating entire factories to the remote interior or of building large new ones there. As a result, government-controlled industries in the Nationalist area in 1944 produced 78 percent of the iron and steel, 51 percent of the motors, 47 percent of the yarn and cloth, and 100 percent of the petroleum.

After the war, the Nationalist government returned to the areas that had been occupied by the Japanese. There, various governmental agencies took charge of more than 2,000 industrial units that had been operated by the Japanese or their Chinese collaborators, and the question then confronting the government was how to dispose of this considerable industrial plant. Because Japanese investments had greatly added to the value of the factories, the government felt that it ought not return those properties to their original owners without some form of payment from the owners. Popular sentiment also ran high that factories owned and operated by "collaborators"—those who had remained in business under the Japanese—should be confiscated.

The government thus found itself in a dilemma. Official ideology prescribed that the government own and operate only heavy and basic industries, while light and consumer-oriented industries should be privately owned. But an equitable formula for the disposition of the light industries that it had taken over proved to be difficult. Moreover, fewer and fewer investors were willing—especially as the postwar inflation worsened—to put their wealth into industrial properties because manufacturing had become far less profitable than hoarding and speculating in commodities. Critics of the government charged that the officials were purposely delaying the sale of light industries to private entrepreneurs and were enriching themselves through the operation of the factories. Whether or not there was any basis for this accusation, the government had become a major participant in the industrial sector by 1947. It or its subsidiary companies produced 90 percent of the iron and steel and 83 percent of the electric power, and it operated 38 percent of the nation's spindles and 60 percent of the looms. In terms of total production, the share of government-owned industries had increased from 15.6 percent in 1945, to 27.1 percent in 1946, to 42.4 percent in 1947.

This quantum leap in the Nationalist government's industrial involvement became a burning political issue during the postwar years. Mao Tse-tung in 1947 declared that bureaucratic capitalism, together with feudalism and imperialism, was a major target of the Communist revolution. It was also widely believed that the "Four Great Families"—Chiang Kai-shek, T. V. Soong, H. H. Kung, and Chen Li-fu—were acquiring enormous fortunes from bureaucratic capitalism. Soong, for example, was variously rumored to hold over US$47 million just in the United States and to own the controlling interest in General Motors—or was it Dupont? It was also alleged in 1947 that Soong, together with his two sisters, Mme. Chiang Kai-shek and Mme. H. H. Kung, held bank deposits in the United States worth US$800 million.

Such assertions contributed to the popular image of the Nationalists as being hopelessly corrupt. Probably, however, the allegations were grossly exaggerated.

When T. V. Soong left China before the Communist takeover, for example, his total wealth was valued at "less than US$1 million"—not an unreasonable fortune for a man who for most of his career had served as China's preeminent banker—although many thought that figure to be ludicrously low.[24]

A more substantial charge is that the state-run enterprises both during and after World War II operated to the disadvantage of private industry. To support the civil war against the Communists and to obviate the inflationary printing of money, the government ran most of its enterprises undisguisedly to raise state revenues. This put the government in direct and unfair competition with private enterprise, often leading to the bankruptcy of the private firms. State enterprises could, for instance, obtain loans from the government-controlled banks at interest rates of 3 percent a month, whereas private firms had to pay in excess of 15 percent a month. Scarce raw materials were also channeled to the state enterprises; the government's textile mills, for instance, received 80 percent of all imported cotton at a time when the supply of domestic cotton was disrupted by fighting in the civil war. Private firms also suffered as a result of the shortage and high price of fuel and power, whereas state enterprises were assured of steady and cheap supplies from other government monopolies, such as the Fuel Adjustment Corporation.

The Nationalist government's involvement in the industrial sector after 1936 was manifestly a return to the traditions of the *guandu shangban* enterprises in the late Qing period; it also foreshadowed the Communists' nationalization of industrial enterprises in the 1950s. Whenever a Chinese government became strong, it seems, it would attempt to control industrial production. The sources of this tendency presumably lie deeply in China's political culture—perhaps in the general disesteem that officials held for merchants, the Confucian distaste for competition and disharmony, or the tradition that the government must dominate all activities that potentially challenged the preponderance of the state over society. Whatever the reasons, private industry during the past century flourished best when governmental intervention was least.

The Industrial Legacy

During the Nanking Decade, approximately seventy years after Zeng Guofan and Li Hongzhang had established the Kiangnan Arsenal, China had still not reached the point of "industrial takeoff," the stage that is marked by a radical break with the traditional economy and by abrupt structural changes in society. Indeed, the modern industrial sector remained marginal to the Chinese economy as a whole and to Chinese life in general. Handicrafts still outproduced modern factories (in terms of value-added) by more than three times. The entire modern sector—manufacturing, mining, transport, and utilities—in 1933 produced only 7 percent of the gross domestic product. That is, 93 percent of the domestic product was still produced by traditional means. Industrial enterprises by the 1930s, moreover, were concentrated in and around the major treaty ports. Fully a half of the 2,435 factories employing power-driven machinery were located in Shanghai, and approximately 82 percent of the looms and spindles of the cotton-textile industry were in just three locations: Kiangsu Province (including Shanghai) and the environs of Tientsin and Hankow.

This record of industrial growth pales by comparison with that of Japan during the same period and has been the source of much frustration and bitterness to many nationalistic Chinese. There were, however, positive aspects to the record. With the value of industrial output increasing at an annual average rate of 9.4 percent between 1912 and 1936 (including Manchuria), the magnifying powers of compound interest had become wondrously clear by the end of that twenty-four year period. Not only had a foundation of plant and machinery been created that had not existed in 1912, but a substantial corps of experienced managers and disciplined, trained workers now existed.

The significance of this became evident during the 1950s when China impressed the world with its large and rapid industrial expansion. Most observers at the time inferred that this growth was attributable to the large investments in fixed capital that the government had put into the industrial sector during the First Five-Year Plan, 1952–57. In fact, the bulk of those investments had been used for new construction, and most of the new plant did not become operational until after 1957. The large increase in industrial output during that period was largely achieved, therefore, by fully utilizing the capacities of the existing factories—those that had been constructed before 1949. An estimated two-thirds of the increased industrial production came from those pre-1949 plants and only one-third from new industrial facilities.

Several segments of the industrial sector in the pre-Communist period had been especially successful. The most dynamic and fastest growing was the chemical industry, which had been launched after a sharp-eyed Chinese entrepreneur saw that foreigners were making substantial profits in China by importing various acids, ammonium sulfate, soda, and monosodium glutamate. By 1936, Chinese production exceeded the imports of all chemicals except caustic soda.

Machine manufacturing was another area of success. Most of these firms had originated as ship- or machine-repair shops, but the skills required to repair such equipment were readily transferable to original manufacturing. By the 1930s, these firms had expanded and matured, so that they were displacing a large variety of imported goods. There were, for instance, ninety-nine manufacturers of spindles, looms, bowing machines, and other machinery for the textile industry. Chinese industrialists also achieved substantial import substitution of matches, cigarettes, flour, soap, glass, and the like. China's leading cement manufacturer, the Chee Hsin company, is another notable instance of industrial success during the Republican period.

Most Chinese industrial firms, however, limped and struggled merely to survive. Debt burdens were heavy; productivity was low; production costs were high; and the quality of the final product was often inferior. Bankruptcies and foreign takeovers were common. A difficulty afflicting virtually all industrial firms was the limited market demand. The poverty of Chinese society generally, and the continued strength and popularity of handicrafts, meant that the demand for con-

sumer goods was insufficiently strong to encourage dynamic industrial expansion. The small size of the consumer-goods industry meant, in turn, that the demand for producer goods remained exiguous.

The difficulties of Chinese industry were often the consequence, however, of the industrialists' own poor management and incompetent financial planning. For instance, industrialists commonly established their enterprises on too large a scale and with too little capital for the size of their operations. Typical of this tendency was the company that, with only 1.5 million taels in assets, planned to construct a cotton mill that would cost over 2.3 million taels. From the very beginning, therefore, firms were often underfinanced and deeply in debt. Companies also inveterately guaranteed an annual payment of dividends to shareholders, usually at a rate of 8 to 10 percent. This practice of guaranteed dividends was used to attract investors, of course, but the necessity of paying dividends even in years when the company was losing money compounded the firms' financial difficulties.

The pitfalls of undercapitalization and guaranteed dividends should have been painfully evident to every industrialist. Examples of failed factories lay everywhere, and journals at the time frequently pointed out the greater success of Japanese firms, which were financially more prudent. But many, perhaps most, Chinese industrialists and investors were essentially speculators, possessed of a get-rich-quick mentality that damaged long-term development. Injurious though this was to the viability of the country's industries, that mentality was probably a rational response to the instability of political conditions, the insecurity of long-term investments, and the relative shortage of investment capital.

Another difficulty assailing Chinese-owned industry was its tendency toward technological obsolescence. When establishing factories, Chinese industrialists generally imported equipment that was similar to that then in use in European or American plants—although sometimes, to cut costs, they bought second-hand machinery. Having made that initial investment, the industrialists only occasionally purchased new equipment, with the result that their plants, measured by world standards, were soon antiquated. By the 1940s, many of the cotton mills' spindles and looms and the cement industry's kilns were thirty and even forty years old. Being technologically backward, the Chinese factories, as compared with the foreign firms operating in China, were usually less efficient, were more labor-intensive (and hence had higher labor costs), and often turned out goods of inferior quality.

The pervasive tendency for Chinese-owned plants to become obsolete was largely attributable to the fact that most Chinese industrialists operated on the razor edge of solvency. Often operating with inadequate capital, guaranteeing excessively high returns to stockholders, and saddled with heavy debt burdens, the industrialists simply lacked the financial reserves needed to retool. In the West, most industrial firms anticipated the need to update their equipment by setting aside depreciation allowances. The vast majority of Chinese firms had no such funds, or if they did have depreciation allowances, maintained them at ridiculously low levels. Lacking such funds and operating at a low profit margin, Chinese factories fell farther and farther behind their foreign counterparts.

The Impact of Imperialism

Even though some scholars emphasize the positive aspects of the industrial legacy, most observers of China, both in China and abroad, have been convinced that the efforts to create a modern economic sector since the mid-nineteenth century failed. This negative assessment has resulted, first, from the belief that if only China had industrialized more rapidly, it might more successfully have resisted imperialist aggression. And it has resulted, second, from the realization that China's economic modernization was pathetically slow in comparison with that of its neighbor, Japan.

Who or what was responsible for China's so-called tardy modernization? For most patriotic Chinese, the answer has been "Imperialist Oppression!" Their reasoning runs something as follows. As a result of the unequal treaties concluded after the Opium War, China could charge no more than a 5 percent *ad valorum* tariff on foreign imports; it therefore lost the capacity to protect its infant industries from unfair competition with Western manufacturers. After 1895, too, foreigners obtained the right to operate factories in the treaty ports. As a consequence, they had the advantage of using cheap Chinese labor at the same time that they enjoyed ready access to cheap investment capital and to the advanced technologies of the home countries. The imperialists also drained off China's wealth by repatriating the huge profits that they made in China and by exacting large indemnities from the Chinese government after each military victory. By destroying the native handicraft industries, imperialism impoverished the people, thus weakening their purchasing power and inducing political instability. And, finally, by linking China's economy to the world market, Chinese producers were imperiled by the shifts of prices and whims of demand on the world market.

Such an answer was emotionally satisfying to a proud people who were suffering the indignities of foreign poaching on China's sovereign rights. The invidiousness of the opium trade and gunboat diplomacy, of extraterritoriality and the indemnities, of the foreign businessmen's arrogant racism and the missionaries' narrow-mindedness were evident to all Chinese who looked beyond the boundaries of their own villages. The story of the sign in a Shanghai park that read "No Dogs or Chinese Allowed" may have been aprocryphal, but patriotic Chinese believed it because it accorded with their expectations of the foreigners' behavior in and toward China. Most Chinese—including Sun Yat-sen, Chiang Kai-shek, and Mao Tse-tung—have been convinced that a very large share, probably most, of their country's political, social, and economic tribulations since the early nineteenth century were attributable to imperialist oppression.

Economic historians in the West, however, particularly during the past two decades, have become progressively uncomfortable with the contention that imperialism was the principal cause of China's "tardy" modernization. Chinese-owned industry, for instance, grew at about the same rate as did the foreign-owned enterprises in China, and the rates of profit of both foreign and native industrialists in China were almost the same. Foreign manufacturing and investments were concentrated inordinately in the treaty ports and Manchuria, and thus

China's domestic economy remained largely insulated from the Western impact. The huge size of China, combined with the continuing strength of the traditional system of manufacturing and marketing, kept most foreign economic influences at a full arm's length. We are reminded, too, that for all the talk of the imperialists' "unfair advantages," the Chinese enjoyed their own "unfair advantages" over the foreigner, such as greater familiarity with the needs and desires of Chinese consumers and superior knowledge about Chinese marketing and other business practices. And the rising tide of nationalism during the early twentieth century led to the antiforeign boycotts and the movements to "Buy Chinese," which put the foreigners at a disadvantage.

Much of the foreign economic impact is also viewed as having been beneficial. It provided the initial impetus without which China surely would have moved even more slowly along the road to economic modernization. Thereafter, it facilitated the transfer of modern technologies to China. Foreign firms and factories served as "schools" where Chinese acquired management and manufacturing skills appropriate to the new technologies and to international intercourse; they also provided models of orderly, efficient industrial operations. Foreign trade is also depicted as having improved the standard of living of many Chinese by creating commercial opportunities for farmers and handicraft producers. Even those few foreign imports that did succeed in securing a foothold in the Chinese market, such as soap, matches, and kerosene (for lighting), may have improved the general quality of Chinese life; they also inspired Chinese entrepreneurs to start producing domestic versions of those goods.[25]

The debate over the economic effects of imperialism is far from ended. Books and articles, taking one side or the other in the controversy, are still being published, and it would be impossible to resolve this extraordinarily complex question here. What has emerged clearly from the debate thus far, however, is that the effects of economic imperialism were neither uniformly destructive of nor wholly beneficial to China's economic modernization. One might conclude, therefore, at least tentatively, that imperialism was at most marginally responsible for China's "tardy" modernization. The deeper causes lay elsewhere.

What the critics of economic imperialism seem to forget is that economic modernization is not a commodity, but a process. It is like a fragile flower not easily transplanted from one environment to another. This was revealed in the experience of Continental Europe, which, after Britain launched the Industrial Revolution, required several generations to acquire the technologies of modern industry and even longer to attain levels of industrial performance comparable with those of Britain. This tardy response occurred despite the facts that the Continental nations' level of scientific practice and elite education was often at least the equal of Britain's, that their average per capita income and availability of capital were far higher than in China in the nineteenth century, and that they had largely completed the tasks of consolidating political authority and had instituted bureaucratic administrations operating in accordance with established law. Certainly, one would expect these European states, which shared with Britain a basically similar culture and closely related languages, to have absorbed modern industrial practice almost automatically. In fact, even the fastest, France and Germany, required almost a hundred years to accomplish their own industiral revolutions.

On the Continent, economic modernization was retarded by conditions strikingly similar to those in China. The greater size of the Continent, compared with England, together with inadequate roads and waterways, resulted in high shipping costs and fragmented markets. And although average per capita income was fairly high, that wealth was distributed unequally—the elite enjoying considerable prosperity, while the great majority lived close to the subsistence level. There was, therefore, little market for the standardized, mass-produced commodities of modern factories, as opposed to the elegant, specialized, and expensive items that small-scale artisans could turn out. Social structures and values on the Continent likewise worked against the modernization of manufacturing. The aristocracy disdained commercial involvement, while upwardly mobile commoners generally favored the professions or bureaucratic office over business or manufacturing. Wealthy aristocrats put their money into land, and even successful merchants sought to improve their social status by diverting profits from their enterprises to land, governmental position, or aristocratic rank. The Continental people's "worship of thrift," emphasis on family considerations in commercial enterprises, and dislike of competition also worked against the adoption of the British model. Finally, government efforts to promote modern factories were rarely successful because "state assistance was more often than not an encouragement to laxity and a cover for incompetence."[26]

Each of these factors, which worked against the Continent's absorption of the lessons of Britain's Industrial Revolution—large land size, poor transportation, a subsistence-level population, denigration of commerce, and so on—existed also in China. But in spades! When viewed in the light of the experience of the nations in Europe, therefore, China's record of industrial modernization from the 1880s to 1949 was not so dismal as is usually suggested.

Still, the fact remains that China's industrial progress lagged far behind that of Japan during and after the Meiji Restoration, from 1868 onward. Why? The answer is partly to be found in the fact that Japan, for more than a century before the arrival of the Western powers in the mid-nineteenth century, had been undergoing profound social and economic changes that were already propelling the economy toward commercial modernization and rising levels of productivity. When Western industrial technology became available after Commodore Matthew C. Perry "opened" Japan in 1853, it was adopted with astonishing alacrity and encountered relatively little opposition.

Japanese economic modernization was, of course, like that in China, a complex phenomenon. A full explanation would also have to take into account such factors as the political pluralism resulting from Japan's feudal background, which permitted regional experimentation and development and which may be contrasted with the centralized, bureaucratic regime in China that tended to smother industrial and regional initiative. And Japan's ruling elite were samurai, members of a military class, who were far more sensitive to the disparities of power between their country and the West than were the scholar-officials who governed China. There was also Japan's relatively small size and ease of transport by sea. And

there was its long tradition of cultural appropriation, which enabled it to borrow from the West without bruising national sensibilities (as it did in China). And, finally, Japanese modernization in the Meiji period was favored by a stable government—in contradistinction to the political disintegration in China—that fostered the development of a modern economic infrastructure, including a nationwide road system, ample industrial energy, a commercial legal code, banking facilities, and popular education.

Japan's rapid economic modernization and attainment of major-power status in less than a half century was an extraordinary achievement. China's course of so-called tardy modernization more closely fits what one should expect when a modern technology is introduced to a largely traditional society.

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