Economic Change in Early Modern China: An Analytic Framework

Author(s): John K. Fairbank, Alexander Eckstein and L. S. Yang

Source: *Economic Development and Cultural Change*, Oct., 1960, Vol. 9, No. 1, Part 1 (Oct., 1960), pp. 1-26

Published by: The University of Chicago Press

Stable URL: https://www.jstor.org/stable/1151919

ECONOMIC DEVELOPMENT AND CULTURAL CHANGE
Volume IX, No. 1 October 1960

ECONOMIC CHANGE IN EARLY MODERN CHINA: AN ANALYTIC FRAMEWORK

John K. Fairbank
Harvard University

Alexander Eckstein
University of Rochester

L. S. Yang
Harvard University

I. The Chinese Economy in the Perspective of Worldwide Economic Development

This paper tries to characterize broadly the process of economic change in China during the century of disturbance which ended with the collapse of the Ch'ing dynasty in 1911. In approaching this task we focus particularly upon the factors that retarded growth. In order to gain perspective upon this century of economic transformation in China and place it in the context of world economic development, we first outline briefly and schematically several paths which industrialization has followed since 1750 in different parts of the world.

A. Phases of the Industrialization Process

Although the process of industrialization has characteristically moved through certain definite phases, both the number and the sequence of these phases have varied in different countries. At the risk of oversimplification we may distinguish two basic models, with the early starters, and particularly England, falling into one pattern and many of the underdeveloped countries of today fitting into the other.

The industrialization process among these latecomers may be divided into five phases characterized by (1) traditional equilibrium, (2) the rise of disequilibrating forces, (3) gestation, (4) breakthrough or as some prefer to call it, take-off, and (5) self-sustaining growth. Typical features of these periods may be generalized as follows:

In phase one, minor growth, innovation and technological change may occur but they are not sufficient to break the rigid and inhibiting bonds of the traditional framework of social and economic institutions.

In phase two, disequilibrating forces which arise are typically exogenous, originating outside the society and subjecting it to the shocks of war, invasion, colonial rule or the like.

In phase three, these shocks weaken the traditional forms of political, legal, social and economic organization, while new institutions and modes of production are introduced and clash with the old. Disruption is mingled with construction

to produce increasing tension between the technically possible and the institutionally feasible. Gestation is evidenced in the creation of certain external economies (e.g., transport, modern commercial or banking facilities), certain industrial nuclei and technically skilled labor, all prerequisite for a breakthrough.

Phase four sees a rapid spurt in the rate of industrial production based in turn on increased rates of investment. Typically industrial growth tends to be most rapid during the breakthrough or take-off, since it is at this stage that the shifts in the production functions are most marked; for many of these are based on once-for-all economies exemplified by shifts from handicraft to machine methods of production. Usually the active leadership in this process is in one or two sectors--textiles, mining, or foreign trade. Industrial growth is accompanied by continuing changes in agriculture.

In phase five, the new industrial economy eventually enters a stage of self-generating growth which continues at a higher rate than under the old order, although less rapidly than during the period of breakthrough. As the growth of established industries slows down, new industries arise to take the lead in the process, indicating that the economic institutions of the society have now become truly industrial--that is, such factors of production as labor and capital have acquired a high degree of mobility and the institutional obstacles to change have been minimized. Economic change and growth, in short, have become institutionalized.

This model fits the experience of India, China, and most other Far Eastern areas (with the exception of Japan) better than it does the experience of the West European countries. For them, the British model is much more applicable. Professor Rostow's three-stage model outlined in his most stimulating article on "The Take-off into Self-Sustained Growth"[1] applies mainly to this British experience.

The distinguishing feature of the British model is that the traditional pre-industrial order itself provided a framework for gestation. The commercial revolution of the mercantile period and the agricultural revolution following it were the necessary precursors of the industrial revolution in England. Endogenous, i.e. internally generated, forces played a dominant role in the rise of disequilibrating forces in the form of new inventions, advances in technology and innovations. Precisely because the disequilibrating forces in the English case arose as the culmination of a long process of preparation, they led directly to a breakthrough, rather than to a prolonged pre-industrial period of tension and gestation as in the Far Eastern case.

In between these two patterns or models are a number of intermediate cases in which intricate interplays of exogenous and endogenous factors produced the disequilibrating forces. For instance, in Japan gestation (in the form of growing commercialization during the late Tokugawa era) evolved endogenously as in Britain; but at the same time, unlike the British case, disequilibrating forces arose exogenously in the shock of foreign contact after Perry "opened" Japan. However, with the period of previous preparation, the Western impact on Japan--unlike that on China--led directly to a breakthrough during the Meiji era.

---

1. Economic Journal, LXVI, 261, 1956, pp. 25-48.

B. Phases of Industrialization in China

The above scheme can be applied to China by assuming that the Chinese economy of the early nineteenth century was in the first phase, that of traditional equilibrium. The old order had already begun to be disturbed by the population growth of the eighteenth century (the process of domestic decline, which became manifest in rebellion, awaits further appraisal). Meanwhile, the best known agent of change in the nineteenth century was exogenous--the growth of Western trade at Canton, which drew China into the network of expanding world trade. The disequilibrating force of the Opium War of 1840 and the Western political and commercial impact thus coincided with the growth of domestic problems of population pressure and administrative decay typical of a period of dynastic decline. These changes began a century-long process of disintegration, transformation and slow gestation within the traditional Chinese order. During this long period, as we shall see, new institutions grew up side by side with traditional ones, a modern economy was built up on the periphery of the old economy, and there was sporadic and scattered growth in some areas (export trade and railroad-building), paralleled by decline or collapse in other sectors (rural handicrafts, particularly cotton spinning). These developments in the latter part of the nineteenth century began to generate an acute degree of tension, in the minds of proud conservatives and later in the minds of modern patriotic Chinese--a tension between the vision of changes which seemed technologically possible for the growth of national strength and the betterment of Chinese life, and the frustrating realities that prevented national self-realization and industrialization within the institutional structure of the old Chinese society. This tension gradually built up to explosive proportions, until the shackles of the old order were violently broken and the Chinese economy erupted at long last into an industrial take-off under totalitarian control which we are witnessing today.

The vigor and violence of the present breakthrough under Communist auspices seems to have been exacerbated by the unusually prolonged period of gestation. China's remarkable early slowness in responding to the Western economic impact may lie behind her present rapidity of change. The fact that the rise of disequilibrating forces and the period of gestation, according to our model, together occupied at least a century suggests a major problem in the study of Chinese economic history--namely, the institutional stability of the old order, which remained remarkably inert long after the traditional equilibrium had been disturbed.

Two concepts may be suggested to account for China's tardiness of response. One is the view that the traditional Chinese order, within the limitations of its inherited technology and value system, had become over the centuries a strongly integrated society with institutions which, developed over long periods, had attained a high degree of sophistication. The old China was thus a firmly-knit and thoroughly tested society with a culture of great vitality. It was also enormous in size, as well as far removed from the aggressive Atlantic society at the other end of the Eurasian land mass. It could not easily adopt Western ways without a fundamental remaking of the entire social order.

The second concept explains China's slow response in terms of political institutions: it suggests that China's political tradition inhibited the growth of a nation state. The Middle Kingdom had remained a universal empire in Eastern Asia, subject to the periodic control of non-Chinese dynasties whose alien rule at Peking frustrated the growth of modern nationalism. Hence China lacked both the public sentiment and the political leadership necessary for a Japanese type of rapid Westernization.

However China's slowness may be explained, the modern century of her economic history presents us with a record of retarded development. While this cannot be called a period of "stagnation" in the literal sense of "standing still," it was at least one of far-reaching social and economic disorganization, which may even have resulted in an actual decline of per capita product. Should further research support this hypothesis, such a decline could be viewed as a concomitant of this period of disturbance, representing the price China had to pay for future growth. Perhaps the disturbance and decline constituted social and economic costs the country had to bear in order to create the preconditions for subsequent economic growth.

II. The Old Order

Before we proceed with an analysis of the Chinese economy of a century ago, certain generalizations are necessary. First, while the old order in China exhibited many characteristics typical of a pre-industrial economy, there were some notable differences between the pre-industrial economies of Europe and China. The Chinese economy existed in an institutional and cultural framework distinctly different from that of Western societies. For example, the single fact of a rice economy based on widespread use of water had far-reaching implications affecting the relationship between land and labor, the density of population, and the forms of village, family and kinship organization. These cultural and institutional differences affected the capacity of the economy to adapt itself to change, to grow and to industrialize.

A second general point is that the economy of early nineteenth-century China approximated rather closely Malthus's and Ricardo's model of a "stationary state," with a population pressing against resources close to the margin of subsistence. The prevailing level of technology remaining more or less static, both the Malthusian population checks and the law of diminishing returns were operative. In sum, the China of the early nineteenth century had a circular-flow economy in which production was absorbed in consumption, with very little if any net saving, so that the economy merely reproduced itself without advancing.

Finally, one basic general factor in China's economic destiny was the rapid population growth in the eighteenth century which led to a doubling, or more, in the mere number of the Chinese people, without much immediate change in the character of their economy, culture and institutions. This demographic growth had been made possible by agricultural expansion in the early Ch'ing period of the seventeenth and early eighteenth centuries, which was facilitated both by the peace and order established under the strong Manchu dynasty after 1644 and its comparatively efficient administration, and by the earlier introduction of new crops like maize, sweet potatoes and peanuts in the period after 1500. The new crops greatly widened the food base by making previously marginal soils productive. By the early nineteenth century, however, the margin or reservoir obtained through the introduction of new crops and varieties was probably exhausted, so that population was pushing against the limit of available resources at the prevailing level of technology. While living standards may have risen in the eighteenth century (on this we lack data), it seems probable that they were forced down in the early nineteenth century. The population expansion had not been accompanied by an agricultural revolution comparable to that of eighteenth century England, while the growth of foreign trade and a money economy during the late Ming and early Ch'ing periods (manifest, for example, in the "single-whip" tax reform) had been contained within the traditional social order.

In effect, the period of the late Ming and early Ch'ing can be characterized as one of extensive, rather than intensive, growth based on expansion of cultivated land area and population. The new crops were not in the category of major technological innovations likely to affect the basic modes of production in either agriculture or processing. While there was some commercialization of the economy, it was not a major or disequilibrating change.

Thus we begin with the general assumption that the Chinese peasantry, through their adaptation to environment, had attained an optimum efficiency in resource use and allocation at a more or less stationary level of technology.

We divide the old Chinese economy of the period 1800-1850 into three levels: (1) the agrarian (rural) level, (2) the commercial level, which is superimposed on the agrarian, and (3) the governmental level which is superimposed on both the agrarian and the commercial.

A. The Agrarian Level

The agrarian level was that of the villages where seventy to eighty per cent of the Chinese people lived.

The capital equipment of the economy at this level included a large accumulation of man-made installations which had been inherited over the centuries--for example, paddy fields with their embankments, dikes and sluiceways, as well as terraced fields for dry farming, irrigation canals of all sorts together with the wooden contrivances for lifting water, wells, the usual village and farmstead buildings together with groves of mulberry trees, tea bushes, and other resources for handicraft production. Accumulating over many generations, these installations represented an extensive and long-continued investment of labor and in turn made possible a more efficient application of manpower to the soil. It was noteworthy that among these items of capital equipment such as wooden plows and stone grain-grinding rollers there was a minimum of metal equipment and machinery. Irrigation water might be lifted, for example, by a rather simple foot treadle or, alternatively, by a mere bucket with ropes held by two persons. Technical devices commonly in use were geared to the ready availability of cheap manpowers.

The natural resources available to the agrarian economy, combined with the capital installations mentioned above, set the character of economic activity. After the eighteenth century extension of cultivation, the additional resources of water and soil available for an increase of cultivation were not great. Similarly, by that time the destruction of forest cover had proceeded very far while the degree of reforestation was insignificant. Coal deposits, although abundant in the northwest and other areas, were not developed and coal was used only on a small scale for local industries. Among the extractive industries, fisheries were rather well developed, both inland and on the coast. Copper, tin and lead were mined in the southwest but had perhaps reached diminishing returns. Iron mining was comparatively undeveloped. In short, the Chinese peasants' use of natural resources was pretty much at the bamboo and wattle level.

Labor in the village was comparatively plentiful per unit of cultivated area. The population increase, under way since the eighteenth century, had left a high proportion of the people in the younger age brackets. Rich culture in South and Central China and the comparable garden-farming methods of North China created a high seasonal demand for hands, and a corresponding need for handi-

craft production to absorb farm labor power in the off seasons. Cropping systems, ranging from the double-cropping of rice in the far south to the winter wheat of North China, made use of this farm labor power, but its year-round employment was made possible only by the subsidiary handicraft industries--especially cotton, silk, and tea production. These industries in South China, together with the longer growing season, provided the basis for somewhat higher consumption standards than in North China, where seasonal unemployment and chronic underemployment were more prevalent. The abundance and cheapness of labor fostered and perpetuated the labor-intensive methods of farm production--for example, those used in the tea, silk and cotton industries, in hand or manpower irrigation, in transplanting and harvesting of rice and other crops; and also in the use of manpower for transportation by pole, barrow, chair, or the rowing, sculling or tracking of vessels. In other words, not only agriculture but also transport was labor-intensive.

Farm technology, through an age-long and continuous process of adaptation between land and labor, had come to be based on highly intensive land use with comparatively high yields per unit of land but a low yield per unit of labor. The stability of this technology was posited on the whole economic and institutional structure. The relative abundance of labor tended to minimize the inducement to innovate, while the scarcity of capital impeded the capacity to do so. At the same time, the traditional assumptions of the peasantry and the landlord-gentry militated against rapid technical change.

Land tenure, based on a general freedom to buy and sell land, cannot be called "feudal" in the Western European sense, and there were few legal shackles on the peasantry (such as serfdom or villainage). Yet the hard facts of the population-resource balance, aggravated by the prevailing systems of agricultural taxation, credit and marketing, kept the peasant near the margin of subsistence. As the nineteenth century wore on, owner operators were in increasing danger of having to sell their land to make ends meet in a bad year. Tenants were in similar danger of getting so heavily into debt that absconding into pauperism or banditry was their only way out. The system of land tenure lent itself to an increasing concentration of land holding, tenancy and absentee landlordism in modern times.

The social structure and customs, although they provided a stable matrix for the various factors of farm production, included certain institutions which particularly inhibited an increase in the efficiency of production. For example, the lack of primogeniture and the customary fragmentation of land holdings among all the sons, and the comparatively enormous expenditures expected for marriage and funeral ceremonies, all served to inhibit saving. Above all, the distinction between the literate upper classes of landlords, merchants, officials and city-dwellers on the one hand, and the great mass of the illiterate peasantry on the other hand, set a limit to the latter's capacity for innovation. The difficulties of the ideographic script kept the Chinese peasant at the coolie level, able to use his manpower with certain time-tried techniques and devices, but unable to rise easily into the upper strata of society. Conversely, men of trained intelligence with leisure to innovate would not often be found in the fields or workshops. The Chinese class structure, reinforced by Confucian ideology, made a sharper division between hand-worker and brain-worker than in Western Europe. Thus the philosopher Chu Hsi might make his famous observation that the stones on a mountain-top had once been in the sea, but he was in no position to become a Francis Bacon. None of China's great painters, though ipso facto scholars, could become a Leonardo.

Entrepreneurship had little opportunity to develop at this rural level. The manufacture of consumer goods like cloth shoes, cotton textiles for clothing, silk and tea were naturally subordinate to agriculture and were generally geared to supplying a strictly local market by using limited capital resources, except as we shall note below. Extractive industries like mining, fishing and lumbering, while somewhat more specialized for the market, shared the same difficulties of being fragmented, labor-intensive and capital-poor, with little change for expansion of production or of marketing.

B. The Commercial Level

This level of economic life served as a sort of highway or bridge linking the agrarian with the governmental level. It performed the distributive and exchange functions which met the closely related needs of inter-regional trade and rural-urban interchange.

The market structure of old China was extremely complex. The agrarian level of economic life was of course self-sufficient only in a relative sense: the share of the agricultural product entering trade channels was rather small, while the dependence of the rural sector upon non-farm purchases was also only of marginal importance. Broadly speaking, rural self-sufficiency was broken in two ways: (1) through unrequited shipments of tax grain and (2) through an exchange of a variety of special products for salt and similar necessities, the few important staples that had to be purchased, and for a few luxury products. On the other hand, trade in the traditional economy can be considered as the supply system for the Chinese upper classes--that combination of large landowners, scholar literati, officials and merchants who constituted the mobile top strata over the inert peasant mass. These people provided the chief market for luxury products, just as they were also the population groups not directly engaged in the process of agricultural production.

Trading activity took place within a quite complex, inefficient and highly fragmented market organization characterized by a marked proliferation of middlemen. The market structure was inevitably peppered with strong monopolistic and monopsonistic tendencies. Trade in staple commodities, the demand for which was quite inelastic, was mostly subject to government monopoly. However, the system of official regulation and licensing frequently broke down in practice, as illustrated by the operation of the salt monopoly, where as much as half the salt might be distributed through illegal smuggling channels which were not secret so much as connived at by the lower officialdom. Of course, breaches of this type in the power of monopoly, far from leading to invigorated competition, merely involved a change from an official to an extra-legal system of licensing. Within this framework, commodity flows ran through an interlocking maze of local, regional, and to some extent even international markets.

Local trade, to begin with, was part and parcel of rural life, centered on the local market towns with their fairs and periodic (typically, tenth-day) village markets to which merchants regularly brought their wares. This local trading activity had a regularity and rhythm comparable to the other cycles of rural activity which carried the villagers through their daily routines, through the seasons of the year, and through the span of human life in an established context of goals, expectations and techniques. Local trade distributed necessary consumer goods like salt, metal ware and paper to the peasant households, together with items considered to be luxuries, like porcelain, tea or silk. This distribution was ef-

fected with an extensive use of barter and personal credit arrangements. In exchange for goods brought in through local trade, the farm surpluses, if any (pigs, fruit, etc.), and special local products like wood oil or opium, were shipped out. Our typical picture of local trade is that it radiated out from the market town or fair about the distance that goods could be transported in one day on a round trip by carrying pole or sampan. This created a cellular pattern of local economy in which a region could survive indefinitely when nature was favorable and similarly might be devastated by natural calamity.

Interregional trade was superimposed on this cellular and interwoven pattern of local trade. Interregional trade was in part merely one aspect of the general urban-rural interchange, i.e., the aforementioned bridge between the agrarian and official levels. However, over and above this, it was a reflection of a certain amount of regional specialization. Among such regionally traded commodities were salt, which was made by a variety of means in some eleven officially established production areas and distributed thence by licensed merchants; tea and silk, which in much of South and Central China were local products of low grade but became goods for regional trade when produced in their highest quality (for example, the teas of Northern Fukien and Kiangs; and the silk of the Huchow region inland from Shanghai); porcelain, which was specially produced under imperial auspices at Ching-te-chen in Kiangsi; copper, tin and lead which came particularly from Yunnan; or heavy timber such as was brought down the Yangtze.

International trade, against this background, may be viewed as merely a special, and from the point of view of the Chinese economy a rather unimportant, form of interregional trade. Chinese commodities which had gone abroad from ancient times had included the silks which crossed the ancient Central Asian route to Rome; Sung porcelain and copper coins, which went by sea throughout the Indian Ocean region; and brick tea, which was taken from the Wuhan region up the Han River route toward Mongolia and Russia. Over the centuries the balance of trade had generally favored China, where the wide range of latitude from the tropics to Manchuria made for an essentially self-sufficient economy. There had been a general flow of gold and silver bullion from Japan, and especially from Mexico by way of the Philippines, with some later increments from Europe and India directly. The early Portuguese had facilitated the exchange of Chinese silk for Japanese silver through Macao. Meanwhile the major commercial development of pre-industrial China was carried on over the junk routes. The fleets of Ningpo exchanged a wide range of produce with the Korean peninsula and southern Manchuria. The main southern route centered on Amoy and went around the Southeast Asian coast to the straits of Malacca. Over this route came a variety of woods, spices and edibles, including sugar. However, none of these forms of international trade had dealt in staple consumer goods until the late eighteenth century, when raw cotton began to be imported from India.

The transport network which made possible this regional exchange within China as well as abroad was well developed within the limits of prevailing technology. The paths suitable for carrying-poles or barrows between villages were supplemented in Central and South China by waterways. Where the North China coolie might compete with donkeys and on the northern border with camels, the chief carrier in the Yangtze basin and southward was the sampan powered by human muscle. Large gangs of transport coolies were available for the portages on the water routes--for example, the tea coolies who after 1850 carried shipments from Northern Fukien into the water network of Kiangsi. The water trans-

portation of South and Central China by river, lake and canal served the great bulk of the Chinese population. The accumulated public works of centuries had produced a nexus of canal and sampan routes, fed by the broad continental system of rivers and lakes which were in turn nourished by the heavy precipitation over the hills and mountains of South China. As a result it was possible to move persons and goods by water routes that were continuous or almost continuous from Canton to Peking and from the southeast coast to the borders of Tibet.

The efficiency of Chinese inland water transport was remarked upon by the early Western embassies to China in the late eighteenth century. Both the British Macartney embassy of 1793 and the Amherst embassy of 1816 on their return from Peking used the canal barge route all the way to Canton except for the brief portage of twenty-four miles or so over the Meiling Pass north of Canton. The Dutch embassy of 1794-95 used this route in both directions. These European observers estimated that Chinese rafts could carry twenty tons on one foot of water.

Meanwhile, coastal transport by the seagoing junk fleets, which totaled on the order of 10,000 vessels, also provided a channel of domestic transportation all the way from Hainan Island to Manchuria. Sea transport of the grain supply for Peking by junk fleets around the Shantung promontory provided an alternative to the Grand Canal even before the decline of the latter after 1852. While not capable of the speed of clipper ships, Chinese junks with their lateen sails were remarkably efficient carriers, especially when using steady seasonal winds on established coastal routes.

All in all, we may regard the complex and pervasive network of Chinese water transport as comparable to the traditional farm economy--that is, highly developed within its technological limitations.

The supply of capital for the operation of this economy was comparatively limited. Savings might be accumulated by the enlarged family in the form of real estate, particularly land, but such savings were not liquid and were seldom available as a basis for credit creation except as security against loans. Rural moneylenders secured high rates of interest but did not become institutionalized as bankers or even as professional moneylenders. The most common kind of rural credit was that granted by landlords to tenants against the security of future crops. Towns and cities naturally had more institutions for capital accumulation. For example, the pawnshops did a lucrative business and were extensively invested in by wealthy officials. Typically, this was a nonproductive type of investment. The hoarded capital of merchant guilds and of licensed merchant-guild members (like the large salt merchant families or the family firms in the Canton Cohong) was sometimes used to finance commercial operations. One of the most rewarding forms of investment was to purchase a licensed position in one of the many monopolies sanctioned by the government--for instance, in the salt gabelle. In other words, money was to be made less by producing goods than by transferring or handling goods or funds, including taxes and fees.

Typical of this situation was the fact that the famous Shansi remittance banks, which were simple partnerships with branches elsewhere in China operating on capital funds on the order of 100,000 or 200,000 taels, were engaged not in deposit banking or lending of funds for productive enterprise but rather in the simple remitting of funds from place to place, mainly for the official class. These banks were developed in the late eighteenth and early nineteenth centuries

to replace the more primitive escort agencies (piao-chü) which had been established to escort and protect the movements of bullion funds from place to place. However, in the course of performing this transfer function in its more sophisticated form--through drafts--they did not become agencies for the creation of credit in the fashion of modern banks. With credit formation thus handicapped, the commercial economy was all the more dependent on the supply of currency, in the form of copper cash or silver bullion. The fluctuations in the rate of exchange between these two media greatly complicated the difficulties of trade in nineteenth-century China, as we shall note below.

The currency and exchange system, like the system of weights and measures generally, was remarkably complex because the major unit of account, the tael (liang or ounce) was not uniform but varied from place to place and trade to trade. The classical description of this situation is that of Dr. H. B. Morse, for the city of Chungking:

> Here the standard weight of the tael for silver transactions is 555.6 grains, and this is the standard for all transactions in which the scale is not specified. Frequently, however, a modification of the scale is provided for, depending in some cases upon the place from which the merchant comes or with which he trades, and in others upon the goods in which he deals. A merchant coming from Kweichow, or trading with that place, will probably, but not certainly, use a scale on which the tael weighs 548.9 grains; a merchant from Kweifu, a town on the Yangtze a hundred miles below Chungking, will buy and sell with a tael of 562.7 grains; and between these two extremes are at least ten topical weights of tael, all "current" at Chungking. In addition to these twelve topical "currencies," there are others connected with commodities. One of the most important products of Szechwan is salt, and dealings in this are settled by a tael of 556.4 grains, unless it is salt from the Tzeliu well, in which case the standard is 557.7. A transaction in cotton cloth is settled with a tael of 555.0 grains, but for cotton yarn the tael is 556.0 grains and for raw cotton the tael is 547.7 grains.
>
> This seems confusion, but we are not yet at the end. Up to this point we have dealt only with the weight on the scale, but now comes in the question of the fineness of the silver with which the payment is made. At Chungking three qualities of silver are in common use--"fine silver" 1,000 fine current throughout the empire, "old silver" about 995 fine, and "trade silver" between 960 and 970 fine; and payment may be stipulated in any one of these three qualities. Taking the score of current tael-weights in combination with the three grades of silver, we have at least sixty currencies possible in this one town.

It seems evident that the tael system's complexity suited the interests of exchangers of currency rather than the interests of sellers or buyers of goods; at any rate it favored all of these persons rather than the producer or the ultimate consumer. We must understand it as an institution tied in with the vested interests of the middleman-merchant class and its patrons the official class, rather than with the interests of entrepreneurs seeking to produce goods or to develop new products and markets. Every time goods or funds passed through the com-

mercial network, a percentage was levied for the costs of exchange operations. Half a dozen such levies and operations would not be unusual in an ordinary transaction between one province and another. Furthermore, the complexity of the tael system was so great as to make exchange an esoteric subject, monopolized by specialists and insiders with a knowledge of the system. This facilitated an inefficient proliferation of services, in which the distributive process involved more layers and more manpower than was really necessary. This inevitably must have impeded commodity flows, causing numerous delays, wastage and spoilage. Moreover, the distributive margin between buying and selling prices was thus increased because of the excessive number of persons who derived support from it.

Management and entrepreneurship at this level of the economy were generally inhibited by the subordination of merchants to officialdom. The patronage of the upper stratum of landlords, literati and officials was essential to commercial operations. In theory, the state was expected not only to preempt certain monopolies like salt and iron, but also to regulate commercial and industrial activities by licensing and other means, and in general limit capital accumulation and expenditure by individuals. The merchant had no legal safeguards to protect his property against exactions from the governmental level, since the officials represented the law. Thus while bureaucratic patronage and protection were essential to commercial operations of all sorts, the official class retained the spirit of tax-gatherers rather than of risk-taking entrepreneurs. Their gentry-landlord background and the scholarly disesteem for the merchant class from ancient times, all imposed strict limits to merchant initiative and innovation. Economic enterprise was carried on within a framework in which the power of officialdom was the final recourse, rather than a system of impersonal law which the merchant might invoke to protect himself. By using official patronage and power, a merchant capitalist could secure certain lucrative opportunities represented by licenses or monopolies, the right to distribute salt, contracts for the transport of grain, or sales orders for the imperial household or official establishments. The merchants' aim was to seek comparatively safe forms of profit-making and therefore to secure an opportunity for levying fees and charges, both official and unofficial, upon one of the great staples of commerce. In each case this opportunity had to be secured on a personal basis and preserved with the support of official power. Thus the whole prevailing structure of incentives was such as to encourage and perpetuate established forms and norms of commerce while at the same time discouraging risk-taking, the seeking out of new markets, or innovation.

C. The Governmental Level

By this we mean the economic activities organized, superintended, or indirectly controlled by the official class on behalf of the imperial government at the capital and in the provinces.

The role of government in the economy was posited on the fact that the official class retained the ultimate power in Chinese society. The government in one sense was rather active in the country's economic life, but in another sense its role was limited and passive. On the one hand, the dead weight of official and quasi-official forms of taxation bore heavily upon the country's economy, as did also the various forms of state monopoly, licensing and the like. All of these, in effect, entailed a negative type of interference. On the other hand, the services performed for the economy by the Chinese state were

minimal--largely confined to the maintenance of the waterworks and the stocking of granaries as a safeguard against famine. The active promotion of mercantile activity, the concept of the development of the economy as a whole--i.e., an implicit or explicit concept of economic growth--or the idea of building up the country's economic power as a prerequisite for augmenting state power, all seem to have been minimal in the Chinese tradition. This accords with the fact that the whole notion of international competition and thus of economic nationalism, even in its mercantilist sense, was absent. This can be illustrated by the fact that there was no idea of a protective tariff, and that similar tariff rates were applied to exports and imports. This general attitude was also clearly reflected in fiscal practice.

The Ch'ing fiscal system was very pervasive, but highly inefficient. It operated within an imposing facade of regulations including quotas for revenue collections by regions, fixed charges on these collections and allocations of payments, both to the capital and to other provinces by transfer directly. Collections were partly in kind but major revenue collections were in money terms. According to the imperial bookkeeping in the statutes, surplus-revenue provinces regularly paid sums to revenue-deficit provinces and all sums entered were allocated to specific purposes. In actual fact, however, it is plain that much larger sums were handled within each province, if only to maintain the bureaucracy and its activities, without being accounted for to the capital. When under pressure for funds, the officials commonly collected contributions, or in other words, made levies upon merchants or indeed upon anyone known to have money. Since such persons usually had secured their funds in part through official patronage, this system of contributions was perhaps not inequitable. Literary degrees and official titles and, in extreme cases, even official positions were conferred upon the contributors. The sums so levied sometimes reached millions of taels from major monopolists in the salt trade or the foreign trade at Canton. But this form of quasi-taxation was certainly not a type of levy to encourage capital formation.

Land tax and labor service formed the backbone of the fiscal system and were aimed at garnering for the government the surpluses of agricultural products and rural manpower which formed the chief economic resources of traditional China. These taxes had a long and necessarily complex history coming down through more than two millenia. In general, by the nineteenth century they had been combined into a complex system of payments in money terms. Expected receipts were listed as quotas, both for provincial and for local areas at different levels. Statutorily, the local quotas were intended to maintain the official post stations, local public works and the bureaucracy, at the discretion of the local officialdom. Provincial quotas were also set for amounts to be made available to the Board of Revenue at Peking. The actual collection of local taxes, as noted above, was several times the statutory amount of the various quotas listed at Peking. The estimation of the amount of taxation actually levied is one of the more important problems awaiting study by economic historians. In general, officialdom was put somewhat in the position of tax farmers, required to report a minimum to their superiors and expected to collect enough in addition to maintain themselves and their activities.

The efficiency of tax collection depended upon the degree of dynastic vigor at the time. During periods of dynastic strength, official corruption tended to stay within bounds and thus fiscal efficiency could be maintained. This frequently meant a lighter tax burden, more equitably distributed, with a larger proportion of receipts finding their way to Peking and with a better performance of public

services. However, in the course of dynastic decline, official corruption tended to be reinforced by the growth of local vested interests, by a decline of morale, and by an increased need for official funds. In such circumstances the efficiency of collection would decline, many large households and favored families would get themselves off the tax registers, and in the end a higher tax total would be collected if possible from a dwindling and impoverished segment of the rural population. The classic result would be rebellion followed by a new dynasty and a beginning of the dynastic cycle.

The grain tribute collected in kind in the Yangtze provinces was a special form of tax to provide the stipendiary food supply of the imperial capital. There was a widespread and intricate administrative network for the transport of this tribute grain to Peking. The grain transport administration had to cope with the problem of maintaining the Grand Canal and the lower reaches of the Yellow River dike system so that grain shipments from the Yangtze delta could traverse the regions normally flooded by the Yellow River system--a major engineering problem as well as an administrative one. The alternative to the Grand Canal was the system of sea transport by junk fleets from the Shanghai area around the Shantung promontory, on a route probably as much subject to shipwreck as the canal route was subject to pilfering or banditry. The grain tribute performed several economic functions: it fed the swollen bureaucracy surrounding the imperial court and the Manchu military garrisons in the north and provided supplies for the maintenance of emergency stocks. At the same time, it played an important role in internal trade and in limiting the self-sufficiency of the rural sector.

The military establishment, with its large stipends to maintain garrisons of Manchu and other bannermen and their families, was one of the great vested interests and administrative problems. The local territorial troops, or constabulary, the so-called Army of the Green Standard, were maintained from local land-tax sources. By the nineteenth century, both the garrisons of bannermen and the constabulary had proved ineffective to quell local rebellion. The eighteenth-century expeditions on China's borders and into neighboring regions like Tibet, Annam or Central Asia had drained funds from the government with questionable economic return. In the ten great campaigns under the Ch'ien-lung Emperor we can see at work the ever-present urge to contain the barbarians, combined with a vested military interest on the part of Manchu commanders who led large forces in border operations and requisitioned even larger sums to support them. It is a question whether the financial profit to be derived from these expeditions was not an important incentive for them. After the White Lotus Rebellion at the turn of the century, however, the traditional military forces had lost their capacity and morale and represented a net drain upon the state economy.

III. Pre-industrial China and Pre-industrial Europe

A comparison of the pre-industrial economies of Europe and China may help us to identify the factors and processes that facilitated growth in the former and retarded it in the latter. Such a comparison yields a number of striking similarities and also some major differences:

A. Similarities

In both societies a primarily agrarian economy supported a small superstructure. It was based on a "natural economy" of local barter with a low degree

of commercialization and minimal use of money. Money served more as a standard and store of value than as a medium of exchange and payment. The monetary system was inefficient. The low degree of commercialization was also indicated by the extensive barriers to trade in the form of tolls, dues and taxes on the movement of goods; the poor development of roads and communications except for water transport; and the general scarcity of capital as measured by high and usurious rates of interest. As a result, these were essentially what Heckscher has called "storage economies," in which consumption largely depended upon accumulated stocks. Such inventories of grain and other foodstuffs were needed not only to meet inter-harvest requirements, but also to serve as a protection against natural and man-made disasters. Thus a considerable proportion of China's current resources were tied up in an unproductive form of investment. Other similarities to the pre-industrial European scene included the low status of the merchant and money-lender, and the extensive use of guild organization to protect and also control merchant activities.

B. Dissimilarities: Foreign Trade and City Growth

The dissimilarities between China and pre-industrial Europe are perhaps even more notable: for example, in pre-industrial Europe possibly the two most important factors contributing to the process of economic change were the growth of foreign trade and the growth of autonomous cities. Europe's development and expansion overseas after 1492 were marked by a widening in the extent of the market and the commercialization of the economy together with extensive capital accumulation, all facilitated through foreign trade. These developments also depended upon the growth of urban centers, with their legal status as chartered cities or city states and the special privileges extended to the burghers. The growth of the bourgeoisie symbolized the rise of modern Europe.

Neither of these elements had a counterpart in China. Foreign trade in proportion to the total economy, even during the Sung period, never reached the degree of importance which it had in Europe. The reasons for this smaller role of foreign trade in the case of China are many and varied. First, the geographical configuration of the Chinese setting put its centers of ancient population on the broad irrigated plains of the Wei and Yellow Rivers. Only later did dense populations accumulate in delta regions like those of Canton and Shanghai, after China's social institutions had been well established. When seaports eventually developed, their growth was handicapped by China's comparative isolation from other major states. Korea remained an appendage, accessible by land as well as sea. Japan and Annam were comparatively small and peripheral. Chinese expansion was chiefly absorbed in the subcontinent of the modern Chinese area--for example, into the Southwest or into Central Asia. With half a dozen domestic provinces, each bigger than any accessible foreign state, China's trade remained oriented toward the domestic market and not based upon seafaring. Arab traders from Southeast Asia had taken the lead in developing commercial sea contact with Chinese ports. Only afterward, in the Sung and Yuan periods, had Chinese merchants become principal participants in maritime trade. From the Ming period, the cultural and social institutions of China became still more firmly ethnocentric in character, with little emphasis upon voyaging abroad (as in the European crusades to the Holy Land or later to Asia on the track of Marco Polo).

Against this background, the deliberate government policy of regulating and restricting foreign trade in the Ming and Ch'ing periods is quite understand-

able. The big Ming expeditions into the Indian Ocean were governmental experiments and were discontinued after the middle of the fifteenth century. The Manchu dynasty came down from the north and controlled South China last. Not until the end of the seventeenth century did it resume the Ming system of tributary trade. Even then it was always ready to sacrifice maritime commerce in the interest of maintaining local order and preventing the influx of subversive foreign influences. China remained largely self-sufficient within her own borders between the tropics and Siberia.

At the same time, the Chinese city was under the domination of officials rather than of merchants. The major urban centers were administrative rather than commercial. The tradition of government monopoly or regulation of all forms of large-scale association and economic activity kept commercial growth subordinate to the political, administrative and military interests of the noncommercial ruling strata.

Lying behind the contrast between China and Western Europe are the differing institutional frameworks and cultural values within which their economies developed. The West, except in Egypt, had little counterpart to the irrigated rice economy which had such far-reaching influence on Chinese life. The Mediterranean Basin facilitated the growth of city-states and sea trade, and Western European geography with its radiating peninsulas later fostered the development of nation-states and overseas explorations. These same factors promoted the introduction and diffusion of new technologies and new ideas. In contrast, the Chinese empire from the beginning was turned in upon itself by the Central Asian land mass and the expanse of the Pacific Ocean. It early developed a bureaucratic empire in which the legal system remained a tool of the official class. Feudalism in China was wiped out at the time of the Ch'in unification. From the Han period on, the bureaucratic network and the ideal of imperial unity militated against the rise of detached and particularistic political-economic areas. In spite of the barbarian inroads after the Han dynasties, the geographical environment and cultural and institutional inheritance of the Chinese people were so strong as to lead to a revival of unified empire. This meant that the pluralistic and multifocal institutional structure of Western Europe, with its struggles and rivalries among the crown, the nobles, the lesser gentry, the cities and burghers, between church and state and between nation and nation within Christendom, had no counterpart in Chinese experience. Where European development out of the chaos of feudalism stimulated dynamic and individualistic innovation and adventure, the Chinese empire remained a bureaucratic colossus bestriding all social life. This was reflected in the legal system which did not protect the individual within the family nor the individual property holder nor, least of all, the merchant; and also in the Confucian ethic, which did not give the individual the same incentive as the Protestant ethic.

It would be a mistake, on the other hand, to regard Chinese society, with its dominant bureaucratic overlay, as the equivalent of a modern centralized state. On the contrary, the old China inculcated the particularism of family-centered kinship relations and village or market-town-centered economic relations. At both of these levels personal relationships remained more important than the universalistic and rational criteria which have developed, rather recently, in modern European society. In short, the different economic growth of Europe and China is symptomatic of the total cultural difference between them.

IV. China's Economic Development, ca. 1760-1914

In essence, the disequilibrating forces and the pattern of disturbance in China were similar to those in most underdeveloped areas. Yet in China economic change followed a different path conditioned by extraterritoriality and the rise of the treaty ports. They served as a means for transplanting not only of Western capital and entrepreneurs, but of Western legal institutions and commercial practices as well. This was possible because the treaty ports were protected from the arbitrary exactions of officialdom and the other impediments to economic activity referred to above. These conditions encouraged the accumulation of capital in the ports, both by Western and by Chinese enterprise.

Therefore, in effect, the prime agents of economic change in nineteenth-century China are comparable to those seen earlier in Europe--foreign trade which provided the impetus, and special city status formalized through extraterritoriality which provided the opportunity. However, unlike Europe, China's new economic growth did not radiate out into, and become diffused throughout, the traditional economy. The institutional barriers in the traditional sector of the economy, and the failure of the government's efforts to achieve an industrial breakthrough under official auspices, seriously impeded factor mobility between the hinterland and the treaty ports; growth did not take root outside the ports, but remained bottled up in them. One part of the economy remained based on the traditional order while another grew up in the coastal and riverine cities. Thus industry was concentrated in the treaty ports in order to secure the institutional advantages of greater legal protection of property and investment. The metropolis of Shanghai and its dominant position in Chinese manufacturing at the end of the treaty century are outstanding examples of this phenomenon, as are also Tientsin and Canton.

In analyzing the pattern of economic change during this century of disturbance, it is useful to distinguish several sub-periods.

A. The Drawing of China into the World Economy, 1760-1842

The domestic economic developments of this period have been little studied but presumably centered about the phenomenal population increase. Under the stimulus of factors operating in the early eighteenth century which need not detain us here, the population more or less doubled in this period. Present estimates give an order of magnitude somewhere around 230 million for 1760 and 430 million for 1842. The economic implications of such growth can be imagined but have not been extensively traced in the record.

Foreign trade in this period centered at Canton as the sole port. It was based on a barter of Chinese tea and silk for Western silver and Indian produce, carried on mainly by the licensed guild known as the Cohong and the British East India Company within a framework of bilateral monopoly. At the Chinese end this trade was conducted on a bargaining basis with a price solution that was necessarily indeterminate. The triangular Chinese-British-Indian trade, balanced by the so-called Country Trade from India, has been studied to some degree. China engaged in a passive trade, in which the foreigner took the initiative by coming to Canton. After arrival, the East India Company vessels had to dispose of their cargoes of British woolens and other products. Very generally, the Hong merchants could take these goods at a loss and consequently had to raise their tea

and silk prices to cover this loss. There was an increasing tendency for the Hong merchants to borrow capital from the East India Company. Hong debts and Hong bankruptcies consequently plagued the British company operations. The increasing tea and silk exports which grew in response to the European demand were made possible only by the imports of raw cotton and opium from India. After about 1819 opium eclipsed cotton as the chief means of "laying down funds" in Canton for the continually growing export trade. But while exports passed outward through the established channels of the Hong merchants and the East India Company, the opium import trade was illegal and centered elsewhere, in the hands of the opium merchants both foreign and Chinese. Thus the Canton system with its British East India Company and Cohong monopolists ceased to be the channel for the major import, and was left standing, so to speak, on one leg only. When the tea exports rose to twenty million pounds a year and above, the result was that opium smuggling, administrative collapse, disorder and friction grew proportionately. All of this culminated in the Opium War and the unequal treaties, which led to the abolition of the Canton monopoly and permitted trade expansion.

The repercussions of the opium dispute of the late 1830's on the domestic economy have not been fully analyzed. The growth of the Shansi banks in the early nineteenth century and the simultaneous accumulations of capital by Cantonese Hong merchants and by salt monopolists in the lower Yangtze and other self-producing regions would suggest that there was a general growth of money economy within China during this period. Another indication is in the increased valuation of silver in terms of copper cash--a complex subject of the Opium War period. Chinese officials ascribed the increased cost of silver to its outflow in exchange for opium, overlooking its attendant inflow to pay for tea and silk. Debasement of the copper coinage, the increased demand for silver as the chief medium of exchange in an expanding money economy, hoarding in a period of disorder, to say nothing of population increase, are other factors lying behind this phenomenon.

B. Economic Disorganization and Decline, 1842-1864

The treaty system established a new institutional framework for foreign trade. In the treaty ports the lead was taken by commission or agency houses, like Jardine, Matheson and Co., Dent and Co., or Russell and Co., which developed services for trade expansion through chartering ships, insuring cargo, and buying and selling on a commission basis for Western merchants at a distance. On the Chinese side, these Western treaty port firms used Chinese compradores, who had formerly been merely buyers of supplies, but who now undertook both to collect export cargoes and to distribute import goods on a commission basis. With the assistance of Cantonese compradores inherited from the earlier period, new trade outlets and trade routes were rapidly developed. They centered particularly on Shanghai, which was closer than Canton to the major centers of tea and silk production. While exports continued to grow, the trade remained handicapped by the small Chinese demand for Western textiles and other manufactured imports. The result was a steady increase of illegal but well organized opium imports.

The impact of this treaty-port trade after 1842 upon the Chinese economy as a whole is still obscure. The domestic living standard recorded in literary references seems to have been characterized by a Confucian austerity and frugality among the ruling strata in the seventeenth century, followed by a more lavish

display and consumption of goods in the prosperous eighteenth century. Similar literary references suggest an increasing economic stringency and imperial parsimony in the early nineteenth century. Under the impact of population increase, the decline of the dynasty's administrative competence seems to have been evidenced by an increased incidence of natural calamities, the declining efficiency of the Grand Canal transport route, and the growth of piracy and opium smuggling on the coast. At any rate, the impact of the early foreign trade must be fitted into this larger domestic context more persuasively than has yet been done. The Marxist-Leninist contention that foreign imports depressed native living standards by wiping out rural handicraft production cannot be substantiated for the period before the 1860's. On the contrary, it may be argued that with the phenomenal increase of tea and silk exports, per capita product may have risen in some areas. In any case, such estimates must vary according to the regions considered--the lower Yangtze tea and silk areas may have prospered while the hinterland of Canton in Kwangsi may have suffered from the new treaty system.

The Taiping Rebellion of 1851-1864, on balance, must be regarded as a product of domestic causes, with foreign factors playing a minor role. Its impact upon the economy was devastating, though this is another subject that has not been sufficiently explored. The great rebellion and the smaller disorders which accompanied and followed it curbed population growth, and perhaps resulted in an actual decline of population. Key areas of the countryside were ravaged and the channels of trade were disrupted. All of this was made worse by the deterioration of the water control system and consequent flooding of the Yellow River, which changed its course from south to north of the Shantung peninsula after 1852. Thus rice supplies for the capital had to be transported by sea instead of the Grand Canal.

One of the most significant effects of the rebellion was the cutting off of the land tax of South and Central China. In response, the imperial government had recourse to expedients like the issue of paper currency and casting of large copper or iron cash. Its chief recourse, however, was to institute taxes on trade, among which the new Maritime Customs at the treaty ports were most important. Unofficially, new taxes were also levied on opium imports. Most important of all was the new provincial tax on goods in transit, i.e., likin, which got started in 1853.

The general result of the rebellion was thus a restructuring of the fiscal system with a shift from direct to indirect forms of taxation. This meant a greater dependence of the imperial government upon foreign trade revenues, at a time when the enforced treaty revisions of 1858 and 1860 made it dependent also on political cooperation with the foreign powers.

C. The Abortive Breakthrough, 1864-1895

This was a crucial period during which Japan succeeded in breaking out of the vicious circle of economic backwardness, while similar attempts to bring about a state-led industrial revolution failed in China, for reasons which we shall try briefly to indicate.

The decade of the active restoration of Confucian government, after the suppression of rebellions, was attended by the use of foreign arms and the setting up of arsenals at Shanghai and Foochow to make guns and gunboats. At the same time, the revised treaties opened the Yangtze River and North China treaty

ports to foreign trade, foreign steamships developed these new routes, and China now lay open to complete foreign access by water, along the coast and in the interior. The power of the foreign trade impact was signalized by the growth of such port cities as Shanghai, Tientsin, and Hankow, and the rise of foreign banks, like the Hongkong and Shanghai Banking Corporation formed in 1864.

Foreign trade in this period increased steadily, and the treaty port cities began their economic domination of the commercial hinterland, into which their goods were flowing. The decline in staple exports led to a diversification of trade as reflected in the export growth of a variety of new products--tung oil, dried eggs, bristles, and similar products of the agrarian economy. At the same time, kerosene and tobacco began to develop their mass markets, symbolized later by the wide distribution networks of the Asiatic Petroleum Company and the British-American Tobacco Co.

Technology and training in industry were given some stimulus from translation programs and from the dispatch of students abroad. Yet here again the traditional social structure and cultural values kept the trained men of superior intelligence from pursuing mechanical or even mercantile aims.

Under the impact of all of these developments combined, domestic handicraft production now began to be subjected to the competition of Western textile imports, while at the same time the transplanting of tea plants to India led to serious competition with Chinese tea exports, and the opening of Japan to foreign trade stimulated Japanese competition in silk exports. China suffered in this competition because the standardization of product and organization of marketing and finance were more advanced in India and Japan. It is extremely difficult, however, to get a balanced estimate of the trends of Chinese farm economy and subsidiary handicraft industries of this period. For example, one imponderable factor was the degree of destruction inherited from the period of rebellion. Government efforts to replant mulberry trees for silk production and to revive agriculture generally, and the evidence of widespread destruction in the countryside of the lower Yangtze provinces indicate the magnitude of this factor. In these decades Indian opium imports began to be displaced by steadily rising domestic opium production, so that in the 1880's these imports actually declined.

This is the period which also signalizes the early efforts at industrialization under official sponsorship. Many industries were begun. The China Merchants' Steam Navigation Company under government auspices and compradore management began to compete with foreign shipping after 1872. The Kaiping Mines were developed north of Tientsin from the late seventies to provide coal for the steamship lines and for Shanghai. Eventually China's first railroad line was built to service these coal exports under central government auspices. The institutional mechanism for these developments in general was that of "official supervision and merchant operation" (kuan-tu shang-pan). This in effect was an attempt to make an industrial breakthrough while leaving the institutional framework essentially untouched. The reasons for the failure of this attempt have now been assessed by Dr. Albert Feuerwerker's volume on China's Early Industrialization.[2] They will also be clearly illustrated in a forthcoming study by Dr. Kwang-Ching Liu which analyzes the failure of one of the leading enterprises under this system, the China Merchants' Steam Navigation Company. The precursor of this system of "official supervision and merchant operation" had been the traditional Chinese salt administration, a government salt monopoly which was essentially a fiscal institution. The attitudes and practices characteristic of such an institution consequently affected the management of all the enterprises set up under this system. They were viewed by the officials as a source of "squeeze" and personal

2. Cambridge, Harvard University Press, 1959.

income; this attitude was typical of all the levels of officialdom, all the way up to the imperial court. At the same time, enterprises operating under this system were used as instruments for broadening the regional power of the different cliques which vied for primacy within the nineteenth-century Chinese state. This attitude then spread to the managers of these enterprises, who viewed them basically as objects of despoliation. Thus both the sponsors and the operators of these would-be-modern enterprises were motivated by a tax-farming rather than an entrepreneurial spirit.

If we look more closely at the function and the role of official sponsorship under the kuan-tu shang-pan system, we see that it first of all provided encouragement and sanction for the founding and initial promotion of the enterprise. This encouragement might take several concrete forms: the granting of certain monopoly rights by the state or its organs to the new company (e.g., shipment of tribute rice); government loans or other types of grants of government capital to the enterprise; and protection of the enterprise by its official sponsors against exactions by other officials. In return the official sponsors would appoint the managers of the enterprise, thereby assuring effective supervision. This inevitably affected the character of management. Managers usually held official rank, and at the same time represented the shareholders. They therefore faced two ways, toward their official sponsors and toward the shareholders. In this situation management tended to be particularistic.

Similarly the investment and financial policies of the company were likely to be characterized by short-term borrowing at high rates of interest, by guaranteed dividend payments, and by inadequate allowances for depreciation. These attitudes and practices were not confined to the late nineteenth century alone, but were widespread in Chinese business and government up to the very advent of the Chinese Communist regime.

Thus the system of "official supervision and merchant operation" was self-defeating. To overcome the dead weight of stagnation in nineteenth century China a massive effort was required, involving large outlays on capital-intensive projects with low prospective rates of return; by raising the marginal productivity of capital such projects could then create a more favorable economic millieu for the growth of private business enterprise. However, an effort of such magnitude could only be mounted by the State and in reality the enterprises fostered by Chinese officials at the time in shipping, mining, communications, etc. were precisely of this type. But because of the very nature of the state and its officialdom, they were doomed to fail.

D. Economic Imperialism and the Beginnings of Industrialization, 1895-1914

The economic repercussions of China's defeat by Japan in 1895 were immediately apparent in the large foreign loans which China had to contract in order to pay the war indemnity. Japan used these funds to develop heavy industry and to build up her monetary reserves prior to a shift to the gold standard, thus forging further ahead of China. The foreign loans were secured on the Maritime Customs revenue and, from this time onward, ate into that reliable and increasing source of central government income. Japan's victory also touched off the scramble for concessions, which were extorted mainly in economic terms. The spheres of interest secured over various regions of China by the imperialist powers included ninety-nine year leases of major ports like Dairen, granted to Russia, or port sites like Tsingtao, granted to Germany. Running inland from

these ports were railroads financed by, mortgaged to, and run by, the foreign powers. The Chinese Eastern Railway cutting across Manhhuria to Vladivostok, as arranged in 1896, was now joined to the South Manchurian Railway running to Dairen under Russian control. The Germans developed a railroad in Shantung on similar lines. In both cases, mining rights along the railroad right of way were also granted the foreign power. In effect, these concessions permitted the imperialist power to invest in China's industrialization, mainly in the form of transportation and extractive industry. In retrospect it may possibly appear to future students that the imperialist powers on balance invested more than they profited from these arrangements--at least this may be true of Germany in Shantung.

The Japanese treaty had also permitted foreign industrial establishments to be set up in the treaty ports on Chinese soil. Thus the last bar to direct foreign leadership in China's industrialization was removed, but it was a leadership which also meant control over large sectors of the economy. In these same years under government auspices leading officials began official enterprises--for example, the textile mill at Shanghai under Sheng Hsuan-huai or the coal and iron complex at Han-yeh-p'ing in the Wuhan area under Chang Chih-tung.

The Boxer Rebellion of 1900 was another disaster which diverted still more of China's revenues to pay debts to foreigners under the Boxer indemnity. In the decade which followed, the central government reform program created new administrative and economic institutions, such as government banks and a central ministry of commerce and communications. A new army was built up with native and foreign equipment, the provision of which constituted a new industry. Railroad building had its first major decade of accomplishment under Sino-foreign auspices, and there was a considerable degree of economic growth, the extent of which has not yet been estimated. This process involved the rise of new industries and economic institutions and the decline of old ones. For example, the century-old Shansi banks began their final decline, being unsuited to modern banking needs. The new and enterprising merchants of Japan and Germany pushed their distribution networks among the Chinese mercantile communities of the interior and developed their markets with less dependence on Chinese compradores. Groups of provincial gentry, merchants and officials initiated railroad projects in competition with those of the central government, although they usually failed to secure adequate finance and management. A few individual entrepreneurs emerged from the Chinese upper strata, like the top scholar Chang Chien, who developed his own cotton mill and other enterprises in his native place of Nantung, Kiangsu. Remittances from overseas Chinese communities began to flow back to China, playing an increasingly important role in the country's balance of payments. Capital accumulated by overseas Chinese from the Canton and Fukien areas was also flowing back into such investments as department stores in the treaty ports. Naturally there was great regional differentiation in this scattered and sporadic economic growth. It centered undoubtedly in the Canton and Shanghai areas. But there was also, for example, a forward movement under official leadership on the Inner Mongolian frontier, where Chinese agricultural expansion was facilitated by the completion in 1910 of the railroad from Peking through Kalgan to Suiyuan.

Evidences of the continued growth of foreign influence over, if not actual domination of, the Chinese economy can also be seen in the first decade of the twentieth century. Financial development agencies like the Peking Syndicate or the British and Chinese Corporation were formed with funds invested by the Hongkong and Shanghai Banking Corporation and the British firm of Jardine,

Matheson and Company. British interests secured control of the Kaiping Mines. British funds were used to build the Shanghai-Nanking railroad and other lines in the lower Yangtze as a British sphere. Negotiations for American financing of Manchurian railroads were prosecuted (to little avail) by Willard Straight and others, and for the Hankow-Canton railroad by an international consortium of bankers. This era of "dollar diplomacy" and projected financial developments under foreign control in various parts of China was climaxed by the collapse of the dynasty in 1911. The foreign bond holders were immediately reassured when the inspector general of Chinese Maritime Customs, Sir Francis Aglen, for the first time took actual receipt of Chinese customs revenues and deposited them for safekeeping in the foreign banks in the treaty ports. This was followed by the Reorganization Loan of 1913 to the new ruler, Yuan Shih-k'ai, from which the United States abstained. The era of financial imperialism was cut short only by the outbreak of the First World War.

As evaluated half a century later, financial imperialism may have seemed more threatening to Chinese patriots in the early twentieth century than it might actually have become in the unfolding of its own operations. Possibly the bark of imperialism was worse than its bite. The fact remains, nevertheless, that from 1896 until the Second World War China's payments abroad on loans and indemnities constituted a sizable and constant financial drain which inevitably impaired her capacity for domestic capital formation, both governmental and private.

E. The Example of Railroads

The various factors facilitating and impeding economic growth may be seen in the history of railroads. In most countries railroads served to widen the extent of the market, stimulate the rapid commercialization of agriculture, the growth of cities and of a money economy, while at the same time the railroad itself provided a market for the iron, steel and engineering industries. But in the crowded countryside of China proper the coming of the iron horse was in no way comparable to its role in the opening, for example, of the American West.

Among many obvious reasons for this, the following may be suggested: First of all, the abundance of water communications in South and Central China, which reached to the capital, serviced by abundant manpower, maintained a severe competition for any railroad enterprise. In the densely populated countryside, land values for a right of way were costly and public opinion on geomantic grounds was superstitiously opposed to railroads. Another factor was the lack of sufficient capital and credit in a society where capital could not easily be mobilized by bond issues or other measures of credit creation. Moreover, the railroad, coming as the tool of the foreigner, met a rising patriotic opposition which was explicitly stated by leading officials: unless and until the Chinese government could build its own railroads and control them, it was preferable to have none. From the beginning it was realized that railroads under foreign control provided strategic means of military as well as economic ingress and invasion.

The railroad pattern which actually emerged was in part a product of the strategy of commercial exploitation through imperialist spheres of influence. Railroads were built under foreign domination from treaty ports inland through the peninsula of southern Manchuria and the peninsula of Shantung, as well as from Shanghai over the Yangtze delta. The Chinese Eastern Railway in the north, for Russia, and the Hanoi-Yunnan Railroad in the south, for France, served as

the most obvious strategic spearheads. A similar plan was evident in the Peking-Suiyuan line, the first one to be built by China, which facilitated the "secondary imperialism" of China's expansion into Inner Mongolia.

Geography constituted an added barrier to railroad development--first, in the form of mountains which, for example, kept the railroad effectively out of Szechwan until recently. Meanwhile the Yangtze itself is so pre-eminent a highway that, as the geographer George Cressey has noted, the railway lines tend to be at right angles rather than parallel to the river. It is no accident that the Chinese railroad network has been built more extensively in North than in South China. We suggest, in short, that the retardation of railroad development was due to the interplay of a variety of factors, a study of which may serve to demonstrate in microcosm the impediments to China's industrialization.

In sharp contrast, we see an entirely different course of development in Manchuria. In that region the railways assumed the role of "leading sector." They turned out to be highly profitable, almost from the very beginning of their operation. At the same time, unlike the situation in China proper, these profits were largely plowed back into investment, not only in the railroads themselves but in other enterprises as well. Consequently railroad earnings constituted one of the important sources for financing the development of other social overhead facilities and also contributed to the founding of other industries. This railroad development greatly stimulated the commercialization of Manchurian agriculture, drawing it into the world trading network. At the same time the railroads themselves provided an important market for engineering, repair, and machine-building services. Railroad development thus became the center of a broadening pattern of economic growth, which spilled over into agriculture, industry, and trade. Moreover, and again unlike the situation in China proper, this growth did not remain confined to the coastal strip of Manchuria. The example of railroad development illustrates the difference in the course of Manchurian, as opposed to Chinese, economic development in general. This difference may be viewed as the result of three categories of factors: (a) the much more favorable population-resource balance in Manchuria; (b) the comparative absence of institutional barriers to modernization such as prevailed in China proper; and (c) the injection of Japanese control and entrepreneurship coupled with large-scale capital imports into Manchuria.

V. Conclusion: Patterns of Retardation

The preceding survey has touched upon two central questions: (1) what were the active agents of economic change in nineteenth century China? and (2) what were the chief factors that retarded economic growth? By way of conclusion, let us summarize briefly the roles played by the treaty ports, as principal centers of change, and by certain Chinese institutions as factors of retardation.

The Western impact transmitted through the ports was a multiple challenge, military, political, economic, social, ideological and cultural. The new influences were inevitably subversive of the old order. Thus the Chinese leaders were plunged into a dilemma. They felt the necessity to meet the challenge, but were unable or unwilling to understand that this could not be done without a radical remaking of practices and institutions, even ideas, in every sphere. This was, of course, one of the great differences between nineteenth-century China and Japan.

The transformation of Chinese life was accompanied by an erosion of the traditional economic order which was evidenced, for example, in the decline of handicrafts and later in the displacement of native banks. This decline of the old was paralleled by the creation of a new order in the treaty ports and in Manchuria. The result was a century of growth and decline occurring side by side.

The data now available do not permit the drawing up of a net balance sheet. We cannot measure the rate of growth in the expanding sectors and the rates of decline in the contracting sectors. In our present state of knowledge, we cannot determine whether the Chinese economy as a whole was expanding or contracting during this period. Foreign trade appears to have been the most important disequilibrating force in the economic realm. It performed the role of a "leading sector," generating an almost classic text-book-type process of cumulative economic growth which, however, remained confined to the treaty port segment of the Chinese economy.

The growth process here was interacting and cumulative. The gradual rise of foreign trade in the early nineteenth century stimulated a demand for the development of financial facilities. Up to the middle of the century, foreign trade had to be financed by the trading firms themselves. This necessarily limited the scope of the trade and the number of firms that could enter it. However, the rise of modern banking and insurance companies, particularly between 1858 and 1864, facilitated the entry of smaller merchants into foreign trade. We see here a sequence--the growth of foreign trade giving rise to a demand for banking facilities, which in turn facilitated the further expansion and widening of foreign trade which led to the processing of export products, such as tea and silk, in the treaty ports, and also to the processing of certain import products which were consumed in the treaty ports. The latter involved the growth of such food-processing industries as flour-milling, sugar-refining, and brewing. In turn, the development of the treaty ports, with a growth of foreign trade and of allied industries, necessarily led to population growth in the ports. This stimulated the demand for public utilities such as water, gas, electricity, and local transport. The development of public utilities and of shipping both stimulated the demand for coal. At the same time, there was a need for engineering shops and small works to service all of these enterprises. The expanding population in the treaty ports naturally demanded housing services. This stimulated housing construction, which gave rise to a growing demand for cement and other building materials. Meanwhile as the market for imported textile manufactures widened, it became increasingly profitable for foreign firms to build and operate textile mills in the treaty ports. A similar development occurred with respect to cigarettes and tobacco, canned goods and certain other consumer products.

However, the question still remains as to why this self-generating process of economic growth remained largely bottled up in the treaty port segment of the economy and why the multiplier effect of investment was thus largely confined to that segment. The precise reasons, the factors and variables, that may account for this require further exploration. On the basis of presently available evidence we surmise that there were three types of factors that hindered the spread of economic stimuli from the treaty ports to the Chinese hinterland: (1) institutional as well as physical (transport) barriers to the movement of goods and, even more important, to the movement of factors of production; (2) leakages from the treaty ports to foreign countries through the medium of profit remittances, so that some of the multiplier effects of investment upon income and employment were felt in the home countries of the foreign firms rather than in China itself; (3) the deve-

lopment of public utilities, banking facilities and other "external economies," which raised the marginal productivity of investment and thus reinforced the economic advantages already enjoyed by the treaty ports as compared with the economy of the Chinese hinterland.

On balance, the treaty port performed certain very important historic functions in China's long-run development. First of all, it created the aforementioned "external economies." It built up the modern commercial network, not only external but internal. It fostered the development of railroads and provided a framework within which modern factory production could be initiated, with primary emphasis upon light consumer-goods industries.

Secondly, as a result of this factory and business development, the treaty ports provided a training ground for Chinese technical and managerial personnel and for Chinese entrepreneurship. It is important to bear in mind that the Chinese compradore and his successor, the Chinese merchant and entrepreneur, built up the Chinese portion of the modern economy under the wing of the foreigner's privileges. In fact the treaty ports became jointly administered centers of joint economic growth, from which the Chinese entrepreneurial class were by no means excluded. On the contrary, the ports attracted Chinese talent and capital. Even socially the bifurcation between natives and foreigners became less distinct than in colonial countries.

Through the Chinese merchant and official classes, the ports also served as a means for mobilizing Chinese savings and channeling them either into the modern banking system or into direct investment in treaty port enterprises. To the extent that these enterprises did not remit profits abroad or invest some of their earnings in enterprises abroad, they too created pre-conditions for a later take-off into industrialization.

Thus a more meaningful view of the significance of the treaty ports might see them as the spearheads of a modern Sino-foreign economy, which was encroaching upon the traditional scene. In a physical sense the treaty ports served as entrance points into the traditional network of Chinese water-borne communications. The aim of the foreign merchant from the beginning was to get his goods flowing into this already well-developed distribution system. Western steamers on the Yangtze plying all the way to Szechwan, symbolized this process. It is significant that the British in the late nineteenth century were carrying three-fifths of China's steamer cargo.

This process was similar to that by which the foreigner joined with the Manchu-Chinese official class in such administrative institutions as the Imperial Maritime Customs Service or the Salt Revenue Administration and Post Office. In a comparable fashion the foreign merchant teamed up with his Chinese compradore and the growing Chinese merchant and banker class to dominate the modern sector of the economy, and spread its influence over the hinterland.

To say all this does not resolve that underlying question: Were the treaty ports in the long view a help or a hindrance to China's economic growth? Many considerations must be brought to bear on this thorny question. It involves among other things that difficult task, to prove a might-have-been--that China could have broken out of her traditional order and achieved a modern industrial growth in the absence of a Western impact such as was actually delivered through the treaty ports. We suspect that when another generation has finally gleaned and

winnowed all the evidence it will be found that the influence of the treaty ports on Chinese economic life varied markedly over time: that they were a stimulus in the nineteenth century, becoming by degrees more of a hindrance in the twentieth.

Capital accumulation in the age of imperialist domination centered increasingly in the treaty ports for reasons mentioned above. On balance it seems plain that after 1895 a considerable proportion of the capital surplus in the Chinese economy was siphoned off to meet indemnity and loan payments abroad. Such payments must be taken as net withdrawals from China's economic resources, in other words, a tax on the economy. The effect was probably to handicap economic growth.

Yet, without minimizing the evils of imperialism, it would be shortsighted to place the center of China's economic development outside of Chinese society. Its retardation, like the long slow process of dynastic collapse, was in large measure a function of the interplay of domestic institutions and conditions. It is these that must be studied to gain further insight into China's economic growth.

If we define "institutions" in the broad sense as long-established patterns of social conduct, we may see their inhibiting influence primarily under the subheads of state activity and the administrative practices of the official class. First of all, the Chinese state failed to provide certain of the minimum pre-conditions essential to economic growth outside the treaty ports. For example, the Chinese authorities singularly failed in the maintenance of peace and order during the whole modern century. They were also unable to create a uniform currency and unified monetary standards. There was no uniform system of weights and measures. There was no stable administrative framework within which an effective market organization could develop. Transport and communications remained poor. Education, health and welfare measures were minimal. The inability of Chinese leaders to create the minimal pre-conditions for economic development was most clearly evidenced in the kuan-tu shang-pan system for "official supervision and merchant operation."