

The Period up to 1939

1. PREWAR BACKGROUND

Predisposition toward Inflationary Finance

China has had a long history of cycles of monetary stability, deflation, and inflation. The fall of dynasties was repeatedly preceded by long trends toward inflationary finance, culminating in the complete disruption of the currency system as a result of the unrestrained creation and circulation of new means of payment. Since paper money made its appearance in China as early as the eleventh century, providing a device by which government authorities were able to expand the supply of money with relative ease, inflation became a problem whenever gold, silver, and copper currencies were supplemented by fiat money to raise the level of expenditures undertaken by China's ruling groups.

The march toward the last inflationary crest in China began with the establishment in 1905 of the Hu-pu (Board of Revenue) Bank, which was authorized to issue bank notes. Its establishment reaffirmed the fact that the leaders of the government, whether politicians or warlords, conservative or revolutionary, seldom departed from the belief that the government could spend more than its income simply by increasing the note issue. In fact, the petition sent by the Board of Revenue to the Emperor in March 1905 suggested that the Hu-pu Bank was founded with this belief in mind:

The Bank is the key to finance and the note issue the key to the Bank. In Western countries, notes are issued in normal time to collect and accumulate gold and silver. In times of emergency the government can obtain money from the Bank which the public will accept because of its confidence in the notes. The Bank can underwrite the issue of bonds by virtue of its reserves of gold and silver accumulated from the issue of notes.

The philosophy embodied in this statement came to have great significance throughout the Republican period, and the financial policies of successive governments showed close conformity to this line of thought in the next several decades. Moreover, in the belief that the note circulation would increase according to the number of banks of issue, note issue was not restricted to one bank. By 1907 two government banks, one commercial bank, and one provincial government bank had obtained the right to issue notes. Twenty years later, the two government banks and no less than twenty-eight commercial and eleven provincial banks were issuing notes.

Agitation for currency reform—the replacement of the confusion of coins and notes by a uniform national currency—had begun before the turn of the century, and foreign experts had been invited to make investigations of the Chinese financial system and to propose reforms; but progress was slow until the Nationalist government of 1928–1937. Even then, government reform stopped short of a final solution to the currency problem. Apart from disagreement on the currency standard and the constant internal political strife, an important reason for the failure was the government's need to create a gold reserve to enforce currency reform. The blueprints for reform proposed a foreign loan to provide China with bank reserves (metallic), but the government feared that this would lead to foreign interference in internal financial matters and restrict its freedom to draw freely upon the banks.

The Silver Standard: A Natural Check to Inflation

As a result of the increased influx of silver due to the favorable balance of trade in the early periods after the opening of foreign trade in the middle of the nineteenth century, and to foreign investments in China in the later periods, silver had become the basis of the currency. Silver bullion in varying shapes and weights, silver dollars of foreign and provincial mintage, and subsidiary silver coins circulated along with copper coins. Each circulated independently of the others, and each was accepted according to its intrinsic value with no fixed ratio of exchange among them. Large transactions in local and foreign trade were made through the medium of silver bullion. The people amassed silver as wealth, banks kept their reserves in silver, and the balancing of interbank accounts was done in silver.

When bank notes were reintroduced at the end of the nineteenth century, they usually circulated only in the cities, the people in the interior persisting in using silver dollars or copper coins. Demand for redemption was great at harvest time, whenever China's balance of payments became adverse and exports of silver were needed, or

when popular rumor held that particular banks issued notes in excess of their cash reserve. Some provincial banks, in the belief that the seal of the provincial government was sufficient to maintain full value, increased their issue without restriction and even attempted to compel the people to accept inconvertible notes. This resulted in depreciation of these notes and the creation of strong popular resistance to accepting them. Had it not been for the public demand for redemption in silver, the predatory attitude of government authorities toward the banks would have brought about violent inflation earlier than it finally occurred.

However, this restraint did not afford absolute protection against unregulated expansion of the note issue. Both central and provincial governments frequently made attempts to suspend the mechanism of the silver standard by ordering the banks of issue to cease redemption. For instance, in 1916 Yuan Shih-kai, President of the Republic of China, needed funds for his attempt to establish himself as Emperor. He proposed to seize the cash reserves of the two government banks, the Bank of China and the Bank of Communications. Since the cash reserves of these banks were relatively small, he instructed them to cease redemption of their notes, and the public was ordered to accept notes at par. This departure from the principles of the silver standard was frustrated by the refusal of the Shanghai Branch of the Bank of China, whose note issue was larger than that of any other bank, to comply with the government's order. For several days there was a run on this bank, but it succeeded in meeting the public demand for silver. Although the Bank of Communications and the Peking Branch of the Bank of China were forced to suspend redemption, the government failed to achieve its objective because of the limited amount of silver it could appropriate from these banks, and the public showed strong resistance to accepting irredeemable notes at par with silver coins.

The provincial governments dealt with the note issues of the provincial banks in an even more primitive manner. Whenever the banks could not redeem their notes, the provincial authorities tried to maintain the exchange value of notes by threatening dire penalties to people found buying or selling notes at a discount. In Manchuria the penalty for exchanging notes issued by the Bank of Eastern Three Provinces at less than par was death. (The official rate was \$50 Manchurian notes per one silver dollar.) Nevertheless, provincial bank notes were circulated at heavy discounts, and this placed a very real limit on the extent to which these issues could be increased. In 1916 the total issue of nineteen provincial government banks

reached about \$200,000,000 (representing silver dollars), more than half of which was irredeemable.

The Banks' Self-Defense against Inflation

Despite the courageous act of the Shanghai Branch of the Bank of China in 1916, the irredeemable note issues of the Peking Branch of the Bank of China and the Bank of Communications continued to increase as a result of government pressure upon the banks. But public confidence in paper currency was badly shaken by the Yuan Shih-kai episode, and in the period 1916-1921 Bank of China issues increased only from \$46.4 million to \$62.5 million, while Bank of Communications issues rose from \$21.3 million to \$30.1 million. After a long struggle to resist further government borrowing, the two government banks managed to withdraw all irredeemable notes from circulation by 1922, and public confidence in paper currency gradually revived. By 1927 the note issue of the Bank of China had increased to \$159.0 million, and that of the Bank of Communications to \$65.1 million.

On March 25, 1928, the Bank of China took a positive step to enhance the value of its currency and to check unlimited expansion of the note issue. A Supervisory Committee, comprising representatives of the Chamber of Commerce, the Bankers' Association, and the Native Bankers' Association, was established in Shanghai to ensure that the bank maintain adequate reserves behind its note issue. Every three months the Committee published a report on the bank's reserve position after it had been certified by a public accountant. This supervision was designed to assure the public that the bank of issue would not permit the government to tamper with the note reserve. The same practice was subsequently adopted by the newly founded Central Bank of China, the Bank of Communications, and private banks of issue. The public became less wary of holding bank notes, and note circulation increased rapidly in the years after 1928. Sound currency gradually drove the unsound notes of the provincial banks out of circulation except in Manchuria and Canton. In Manchuria, where large amounts of currency were required seasonally for the marketing of huge harvests of agricultural products, the soundness of the money was overlooked. In Canton large annual inflows of overseas Chinese remittances gave rise to greater demand for local currency than the sound banks could provide.

After the death of Yuan Shih-kai a succession of governments relied heavily upon inflationary financing. Since the 1916 fiasco had proved the futility of using direct intervention to obtain funds

from banks, resort was made to more subtle methods, the most frequently used device being the sale of government bonds to issuing banks which could hold them as reserves to the extent of 40 per cent of total note issue. Prior to 1935 the capacity of the banks to absorb government bonds had already reached saturation point.

It can be seen that under these conditions strict adherence to the rules of the silver standard was the only check on note issue, and that, if the banks had been relieved of the responsibility of redemption in silver, an inflationary process would probably have been set in force.

Change from the Silver Standard to Foreign Exchange Standard

The increasingly high price of silver, caused by the leading Western financial powers' retreat from the gold standard after 1931, and climaxed in 1934 and 1935 by the American silver purchase policy, had a serious deflationary effect on China's economy. Large amounts of silver flowed from the interior to Shanghai and other ports for export. The loss of silver reserves reduced the credit base, money became scarce, and commodity prices fell. The necessity for currency change was recognized, and in November 1935 the existing silver standard was replaced by a new foreign exchange standard worked out with the aid of foreign experts, including Sir Frederick Leith Ross from Great Britain. The new currency plan provided that:

The bank notes issued by the Central Bank of China, the Bank of China, and the Bank of Communications should be the nation's sole legal tender, the Chinese National Currency, abbreviated CNC.

The use of silver for currency purposes should be prohibited, and that the public should surrender to a Currency Reserve Board appointed by the government, or to its agent banks, all monetary silver in their possession in exchange for legal tender notes.

The Central Bank of China should buy and sell without limit foreign exchange at "current rates." The first official rates should be, respectively, 1 shilling 2½ pence per Chinese dollar for buying sterling, 1 shilling 2½ pence per Chinese dollar for selling sterling, and 29½ cents and 30 cents per Chinese dollar for buying and selling U.S. dollars.

The introduction of the new currency system dispelled the anxiety of Chinese businessmen that internal price levels might fall through further increases in foreign silver prices, for they were confident that domestic prices would rise through a fall in the internal value of the Chinese dollar. It also appeared that credit conditions would ease with the adoption of a more flexible monetary standard. The

public appeared to be willing to surrender its silver for paper money because the new currency system had the support of the British banks in China.

But the leading Chinese bankers in Shanghai were most apprehensive over the potential dangers of the new system. Indeed, the draftsmen of the plan had not lost sight of the danger of inflation, and had warned the government that two other measures of financial constraint should accompany the currency reform. They proposed, first, that the Central Bank of China should be reorganized as a Central Reserve Bank, with capital subscribed by the commercial banks, private citizens, and the government. In this way the Central Bank would be separated from the Ministry of Finance and raised to independent status; and the supply of money would be supervised by a committee on which responsible members of the business community would have a deciding vote. Second, the authors of the 1935 reform urged that the government rationalize its finances to make a balanced budget feasible, thus reducing the government's dependence on deficit financing through note issue. In acknowledgment of these suggestions, the government pledged that it would reorganize the Central Bank in the manner indicated, and declared that it was ready to embark on a thoroughgoing overhaul of government finances to bring the budget in balance within eighteen months. These promises did not allay the fears of the Chinese bankers, who, remembering the previous twenty years, foresaw the dangers of inflation.

Unfortunately, their fears proved to have been well grounded. The Central Bank never gained independent status, and no serious attempt was made to reorganize government finances. From the time when the new currency system came into operation in 1935 to the middle of 1937 the note issues of the four government banks increased from CNC \$453 million to CNC \$1,477 million. Only about half of this increase represented notes issued against silver surrendered. The details of this expansion are given in Table 1.

Movements in General Price Level prior to 1939

In the century prior to 1935 three major factors influenced general price levels in China: domestic agricultural harvests, world commodity prices, and the world price of silver. Two key commodities, food and clothing, which account for the bulk of consumer expenditures in a subsistence economy, led changes in the prices of other commodities affecting the cost of living. Before 1900 food prices fluctuated violently in response to the size of the domestic crops. Since the circulation of copper coins was limited, the shortage of money at

TABLE 1. NOTE ISSUE OF FOUR GOVERNMENT BANKS¹

Date	Notes in Circulation, CNC
Nov. 1935	453,000,000
Dec. 1935	672,983,000
June 1936	947,971,000
Dec. 1936	1,330,960,000
June 1937	1,477,200,000

¹ Including the Farmers' Bank. Based on the statistics compiled by the currency department of the Ministry of Finance.

harvest time had a dampening effect on agricultural prices. This seasonal effect was diminished as the circulation of silver dollars spread after the turn of the century. After 1900 China began to take greater advantage of imports of foreign agricultural products whenever they became cheap relative to home-produced goods through either a fall in world prices or a rise in the price of silver. Since clothing entering the Chinese markets was almost wholly imported until the 1920's, its price, too, depended on world prices and the silver exchange rate. Consequently, foreign prices of food and clothing and the price of silver were important determinants of China's internal price levels. This brought close correspondence between internal price movements and world price trends until 1930. Discrepancies between internal and external price levels did, of course, occur; but they tended to be evened out by changes in the volume of imports. For instance, a rise in the internal price levels, an increase in the value of silver on world markets, or a decline in foreign prices stimulated an inflow of imports that exercised a deflationary influence on internal price levels, bringing them closer to prices abroad. Thus, if world prices were converted into Chinese currency at the prevailing rate of exchange, with corrections for freight and insurance charges and the generally inferior quality of Chinese commodities, differences between internal and external prices were small. The comparison in Table 2 of Chinese and American prices of cotton and wheat during 1930 shows the tendency toward parallel movements in Chinese and foreign prices.

After 1930, however, fairly big disparities appeared between price trends in China and those in Great Britain and the United States. Up to the time of the Japanese invasion in 1937 Chinese price levels passed through two distinct phases, the turning point coming with the currency reform of 1935. The wholesale price indexes for the United States, the United Kingdom, and China (Shanghai), and the

TABLE 2. CHINESE AND AMERICAN PRICES OF COTTON AND WHEAT
(U.S. prices converted to Chinese currency)¹

1930	Cotton (per picul)		Wheat (per picul)	
	China (Hankow)	U.S.	China (Hankow)	U.S.
Jan.	51.0	75.4	6.97	7.73
April	50.4	74.0	7.17	7.98
Aug.	45.0	71.4	7.00	7.84
Dec.	46.7	65.5	5.94	6.79

¹ Based on data in the report of Bank of China, 1930. One picul equals 2.91 bushels.

index of the exchange rate of Chinese dollars for sterling in Table 3 illustrate the reversal in Chinese price trends in 1935, and subsequent differences in Chinese and world price movements.

TABLE 3. WHOLESALE PRICE INDEX
(1935 = 100)

	U.S. ¹	U.K. ¹	China (Shanghai) ²	Exchange Rate Index in Sterling ³
1930	109	112	120	115
1931	85	99	132	146
1932	71	96	118	118
1933	74	96	108	118
1934	89	99	101	109
1935	100	100	100	100
1936	102	105	112	122
1937	108	122	124	122
1938	100	112	159	166

¹ League of Nations Monthly Bulletin of Statistics, Nov. 2, 1939.

² Based on index numbers of wholesale prices in Shanghai, compiled by National Tariff Commission, Ministry of Finance.

³ Quotations of TT Rate (Telegraphic Transfer Rate) for sterling in Shanghai.

In 1931 wholesale prices in the United States and the United Kingdom fell considerably (by 12 per cent and 22 per cent, respectively) while Chinese wholesale prices rose by 10 per cent. This increase was mainly attributable to a 21 per cent depreciation in the effective Chinese exchange rate on foreign countries, resulting from a fall in the world price of silver. The world depression had not yet affected China, and the drop in silver prices more than counterbalanced the

deflationary effects of China's growing foreign trade deficit. In 1932, when the United States, Britain, and a host of other countries abandoned the gold standard, world prices began to level off. As a result of the rise in world silver prices following the United States Silver Purchase Act of 1932, however, prices in China began a downward trend which lasted until the currency reform of 1935. The external value of the currency appreciated by 23 per cent in 1932, by another 8 per cent in 1934, and by 9 per cent in the first nine months of 1935. Recovery of foreign demand for China's exports was discouraged, China was flooded with cheap agricultural imports, and large quantities of silver were exported. Commodity exports slumped, and internal prices of foodstuffs and raw materials were forced down by competition from foreign goods. In the years 1933-1935 Shanghai wholesale prices declined by 24 per cent, while prices in Britain increased by 4 per cent and those in the United States by 41 per cent. The fall in Chinese commodity prices would have been even greater if the government had not levied an export tax on silver equal to the differential between its internal and its external value. This reduced the outflow of silver, the main deflationary force affecting domestic price levels.

The experience of the early 1930's demonstrated the undesirable deflationary effects of rising world silver prices on the Chinese economy; and the main object of the currency reform of 1935 was to break the link between internal price levels and silver. After November 1935, when China left the silver standard, the foreign exchange rate was fixed by the Central Bank, and it ceased to follow the world price of silver. Nevertheless, the exchange rate continued to have great influence upon internal price levels until the outbreak of the Sino-Japanese war in 1937.

The new rate of exchange decided by the government at the end of 1935 represented a 20 per cent depreciation in the external value of the currency. In relation to its former silver content, the new Chinese dollar was greatly undervalued on the world market, being no less than 40 per cent below what it would have been at the ruling London price of silver. This discrepancy had a significant psychological effect on Chinese financiers and businessmen who believed that the internal value of the currency would fall in line with its new external value. In the two years following exchange depreciation Chinese demand for securities, real estate, and other domestic forms of investments rose significantly, contributing to increased wholesale price levels. At the same time, exchange depreciation raised Chinese prices of imported goods—an effect that was strengthened by increases

in wholesale prices in Britain and the United States—and provided a substantial degree of protection to local agricultural and manufacturing enterprises which had fallen into a precarious state during the earlier years of the depression. In various ways, therefore, the depreciation of the currency imparted buoyancy to industry and trade. It is more important from our point of view, however, to note that the currency reform of 1935 provided the basis for expanding the supply of money with relative ease; and, in the absence of controls, it actually generated mild inflation as early as the 1935–1937 period.

2. THE FIRST PERIOD OF WAR INFLATION: 1937–1939

Wartime inflation in China falls naturally into three phases. There was a period of moderate inflation dating from the outbreak of hostilities in July 1937 and lasting until the second half of 1939. In this early stage prices in Free China rose at the average rate of 40 to 50 per cent per year. There followed a two-year period, ending in late 1941, in which the people began to lose confidence in the currency. Hoarding and speculation became widespread, and prices increased by 160 per cent each year. Inflationary trends again quickened after Pearl Harbor; and in the remaining four years of the war annual price increases in Free China averaged more than 300 per cent.

The Impact of the Japanese Invasion on Prices in Free China

The origins of hyper-inflation in Free China are associated with the abnormal conditions created by the war with Japan and must be set against the background of Japanese military operations. After the fall of Peiping in July 1937 the Japanese armies overran Northern and Eastern China with extraordinary rapidity, and by the end of the year they controlled a broad sweep of China stretching from Suiyuan province in the north to Chekiang on the coast. In November 1937 the Chinese Government moved to Hankow. In a few short months the enemy had gained possession of the richest agricultural and manufacturing regions of China, and had severed Free China from the vital seaport of Shanghai.

After their early victories the Japanese adopted a dual strategy of cutting China's lines of communication with the outside world by seizing control of the coast and infiltrating the provinces on the border of Indo-China and at the same time pushing west along the

Yangtze toward Ichang and Chungking with the object of severing north-south road and rail arteries and blocking east-west river communications. After September 1937 the Japanese Second and Third Fleets attempted to blockade the entire coastline to Chinese shipping, but imported goods carried in foreign vessels were reaching China in considerable volume. In October 1938 Japan tightened her grip on the coast by seizing possession of Canton, and, a few days later, strengthened the blockade of the Yangtze by capturing Hankow. The fall of these two cities meant that the vital Hankow-Canton railway passed out of the control of Free China, and that the international trade route via Hong Kong was severed. By the close of the year the Japanese occupied a third of China—regions producing 40 per cent of China's agricultural output and containing 92 per cent of her prewar industrial capacity.

In 1939 the enemy launched a new offensive in the south aimed at disrupting China's communications with Indo-China. In November they captured Nanning in Kwangsi Province, an important center of road transshipment. Meanwhile in the central provinces the Japanese armies fanned out on either side of the Yangtze with the object of immobilizing Changsha, a focal point of rail and river transport south of the river, and Ichang on the Yangtze, the last remaining link in the water communications between Chungking and the eastern provinces. The campaign against Changsha failed; but the defense forces at Ichang were overwhelmed in June 1940.

The loss of the coastal districts exerted an immediate inflationary influence on the economy of Free China. Prices of chemicals, metals, electrical goods, and other commodities normally imported or produced in the coastal provinces, began to rise very rapidly; and they continued to lead the increase in general price levels throughout the war. The capture of Canton and Hankow in the latter half of 1938 contributed to a 72 per cent rise in import prices during this period. Each advance made by the Japanese toward sealing off Free China from communication with the outside world was matched by a rise in import prices, as shown in Table 4.

The Chungking index of import prices in December 1939, after hostilities began in Kwangsi, and Nanning had been captured, was more than double the June figure. Prices of commodities transported from other provinces were similarly affected by the disruption of communications, particularly in the second half of 1939 when the Japanese carried out their large-scale attack on Changsha. In contrast, prices of locally produced goods, mainly consisting of foodstuffs and agricultural raw materials, were some six per cent lower than prewar until

The Historical Background

TABLE 4. INDEXES OF WHOLESALE PRICES IN FREE CHINA
(Base: Jan.-June 1937 = 100)

	Locally Produced Goods (Chungking) ¹	Goods from Other Provinces (Chungking) ¹	Imported Goods (Chungking) ¹	All Commodities (All of Free China) ²
Dec. 1937	93	125	147	109
June 1938	95	195	227	127
Dec. 1938	115	275	389	155
June 1939	141	313	501	205
Dec. 1939	221	578	1,054	306

¹ Taken from tables of monthly statistics compiled by the Economic Research Department of Central Bank of China (simple geometric means for 22 basic commodities). Chungking was the wartime capital.

² Taken from tables of monthly statistics compiled by the Directorate-General of Budgets, Accounts and Statistics (simple geometric means for 22 basic commodities).

mid-1938 as the result of an unusually abundant harvest in Szechwan province. In 1939 prices of these items began to rise in conformity with the general inflationary trend.

Thus the military operations of the Japanese created in Free China very serious shortages of manufactured goods, which in turn exerted a strong upward pressure on prices. The situation was further aggravated on the demand side by a movement of population out of the territories threatened by the enemy into the provinces of Free China. It has been estimated that fifty million refugees had migrated from the war zones into the interior by 1940, increasing the population of Free China by about 25 per cent. These figures may exaggerate the size of the movement that occurred; but the influx of refugees was certainly very large, exerting considerable pressure on supplies of food and clothing. The flight of population inland even necessitated the cultivation of new types of agricultural commodities to satisfy the preferences of newcomers from the coast.

The Government Deficit

In addition to the powerful inflationary forces released in Free China by the Japanese invasion there were internal causes of inflation which we must examine.

When the Japanese attacked China, the leaders of the Nationalist government pledged that they would wage a total war against the

aggressor without regard for cost or concern about the potential inflationary consequences of a full-scale campaign. They pinned their hopes for solution to the problem of war finance on the willingness of the general public to make voluntary sacrifices, and on financial and military aid from friendly nations. They called upon the people to subscribe to the National Liberty Bonds immediately after the outbreak of war and appealed to the United States, British, and Soviet governments. The first foreign response came from the Soviet Union; the United States followed. The Chinese people wholeheartedly endorsed the sentiments of the government without any conception of the burden they would have to bear in respect to rising price levels. A few economists advocated heavier taxation and controls on consumers' spending, such as those employed by the Western nations in World War I; but their ideas were dismissed by the Ministry of Finance and the business community as academic and impractical for China.

In the latter half of 1938 the government launched a program of resistance and reconstruction, which had been adopted by the Kuomintang National Congress in April. The administrative departments of the government were retained intact despite the reduced area of their operations, and the army was maintained at full strength. The government turned its attention to the problem of developing industries and communications in the interior. Industries were needed to replace those lost to the Japanese and to offset the reduction in imports; communications in the interior were badly in need of reconstruction and expansion, a particularly pressing problem. Since Free China contained only about one-tenth of the total mileage of railways in China, transport was slow and costly. As the Japanese tightened their coastal blockade it became increasingly important to develop alternative trade routes through Indo-China and Burma. Hence the government expended huge sums on the development of communications and granted an unprecedented amount of financial assistance to all forms of productive enterprise. These undertakings led to an increase in government expenditure of about 33 per cent in the period 1937-1939, a very large expansion considering that in 1939 the government's activities were confined to an area about half the size of its peacetime territories.

No real effort was made in those early years to match increased government expenditures with increased revenues. As the Japanese extended their sphere of authority into the wealthy eastern provinces, revenues of the Nationalist government declined rapidly. As a result of the loss of the main tax-paying centers of the east, revenue was

63 per cent below prewar in 1939 and the government deficit rose by more than a third in 1939, as shown in Table 5.

TABLE 5. CHINESE GOVERNMENT EXPENDITURE, REVENUE, AND DEFICIT AND THE NOTE ISSUE, 1937-1939
(CNC \$ millions)¹

Period	Note Issue	Expenditure	Revenue	Deficit (surplus)
1936-37	1,410 June	1,894	1,972	(78)
1937-38	1,730 June	2,091	815	1,276
1938	2,310 Dec.	1,168 ²	315 ²	854 ²
1939	4,290 Dec.	2,797	740	2,057

¹ Expenditure and revenue for 1936-1937 based on data in W. Y. Chang, *Money and Finance in China* [in Chinese], Formosa, 1952, pp. 140-144. The unused balance of the new consolidation loan in 1936 accounted for the small surplus. Expenditure and revenue for 1937-1939 based on the statistics compiled by the Statistical Department of the Ministry of Finance.

² Half year, July-December.

The government planned to tide itself over the initial stages of the war by resorting to traditional policies of selling bonds and increasing the note issue. In the longer run it hoped to receive foreign aid to bolster the economy. At the end of 1937 the government issued CNC \$500 million in National Liberty Bonds, little more than \$250 million of which was subscribed by the public despite a nation-wide selling campaign. Excessive issue of bonds before the war had destroyed public confidence in government securities, and the capacity of the banks to absorb bonds had already been exploited to the limit. The failure of government loans in 1938 and 1939 was almost complete. In 1938 a mere CNC \$18.4 million out of \$1,450 million worth of bonds offered for sale was taken up by public subscription, and the record of 1939 was no better. The Ministry of Finance was forced to abandon its original belief that bond issues would be supported by the public out of patriotic motives, and had to rely on note issue and incidental sales of foreign exchange to finance the deficit. Forty per cent of the deficit for 1937-1938 was offset by proceeds from sales of foreign exchange and bond subscriptions. Creation of new money proceeded relatively slowly in this period, therefore, rising by 23 per cent from CNC \$1,410 million in June 1937 to CNC \$1,730 million a year later. In 1939, however, sales of foreign exchange were restricted by the depletion of the Central Bank's reserves of foreign currencies, and bond sales were negligible. Notes in circulation

increased by 148 per cent to CNC \$2,560 million in the year after June 1938.

In neglecting to counter the effects of its increased spending by developing new sources of revenue the government was setting in motion powerful inflationary forces in Free China. Late in 1938 the scope of the income tax was widened to include company incomes, and an excess profits tax was imposed; but the new measures were not put into effect until the close of 1939. The yield from these taxes was low and of slight importance in the over-all picture of government finance. The government failed to neutralize the rise in consumer incomes stemming from increased government spending. It is true that at the beginning of 1939 a half-hearted effort was made to fix prices of daily necessities at fair levels, to control the distribution of these commodities to a few of the major inland cities, and to ban hoarding and speculation in essential commodities; but these measures were ineffective. It was not until 1942 that the government seriously attacked the problem of preventing the increased purchasing power in the hands of the public from being automatically translated into higher prices.

In effect, the government in the early years of the war passively accepted the loss of its revenues and allowed the inflationary consequences of the deficit to go unchecked. The government's attitude reflected, first of all, the rudimentary development of central and local government administrative organization in China at the outbreak of hostilities. New and comprehensive taxes were needed, with adequate administrative machinery. Similarly, the Nationalist government had no previous experience in the application of controls on prices and the allocation of commodities. However, although these considerations explain much, the fact remains that there was a fundamental weakness of official policy. The government neglected to review its expenditures on defense, new industrial projects, and administrative services with a view to bringing these in line with decreased revenues. Economies could have been effected by reducing the number of army units, and by training numerous small guerrilla detachments living off the countryside at little expense to the government. A smaller well-equipped fighting force could have been created to replace an army whose size militated against its efficiency. The administrative system could also have been rationalized by eliminating redundant departments and by cutting down the staff of those whose activities were curtailed by the Japanese occupation of the eastern provinces. No attempt was made to economize along such lines. The need for retrenchment of government finances became more obvious after

the fall of Hankow and Canton at the end of 1938. Increases in wholesale prices in Free China, which had previously averaged 2 per cent per month, now rose to 4 per cent per month. Viewing the problem of inflation in the light of cold fact rather than of national sentiment for the first time, the general public began to express anxiety about the state of government finances.

The Chinese government failed to comprehend that the essential economic problem of the war was one of achieving maximum military effort from the limited resources at its disposal. On the basis of the monetary stability of the prewar years, Generalissimo Chiang Kai-shek was overconfident of his ability to surmount the financial obstacles of a war economy. In point of fact, the silver standard acted as a brake on the money supply during the late 1920's and early 1930's, and stability was achieved despite the disturbing influence of government financial policies. The government leaders were swayed by a strange combination of traditional Chinese beliefs and modern authoritarian ideas: "Where there is land, there is money," and "Where there is absolute power, there are goods." Since the Nationalist government ruled half of China, it must have a plentiful money supply; since the Nationalist government exercised absolute power, its legal tender must be able to command the real resources required for the conduct of war. The government also assumed at this time, with characteristic optimism, that foreign assistance would soon be forthcoming as it had been on many similar occasions in the past when China had resisted an invader. Out of this unrealistic conception of the government's capabilities emerged the marathon resistance program planned without regard to the limits imposed by the economic potential of Free China and the unhealthy state of government finances. Hence the deficit grew apace, generating the inflation that was to bring Free China near economic collapse in the later stages of the war.

The Expansion of Bank Credit

Free China was singularly ill-equipped to undertake the task of financing the development of manufacturing and mining industries and the expansion of food production in the interior. Prewar Chinese banking facilities were concentrated in the eastern provincial cities, with control centralized in Shanghai. Supply of credit in the interior relied heavily on small old-fashioned native banks, which in turn depended on banking facilities in Shanghai for their financing. The inherent vulnerability of such a banking structure was immediately

apparent when the Japanese encircled Shanghai and the supply of credit to the interior was cut off at the source.

The responsibility for providing credit in the interior devolved upon the Central Bank of China and branches of the other government banks. In consonance with its program of resistance and reconstruction, the government encouraged expansion of credit to private industry during 1939. The outstanding balance of industrial and commercial credit granted by the government banks rose from CNC \$1,471 million in 1937 to CNC \$2,578 million in 1939. The government felt that this liberal credit policy was indispensable in the circumstances of war, and the policy did indeed stimulate the growth of industrial capacity in those early years. However, it placed a heavy strain on available productive resources. Coming at a time when supplies of capital goods were severely curtailed by the encroachments of the Japanese, the credit expansion was a potent inflationary factor. Experienced industrial workers were scarce in the interior, and wages rose in the competition for skilled and semiskilled workers. Thus the means of war were bought by the establishment of industries in Free China at the cost of inflation in capital goods and labor markets.

Despite a fall in bank deposits immediately following the Japanese invasion, private loans of the government banks were adequately covered by their deposits in 1937, 1938, and 1939, as Table 6 indicates.

TABLE 6. GOVERNMENT BANK LOANS AND THE NOTE ISSUE, 1937-1939
(CNC \$ millions)

Year	Increase in Deposits ¹	Increase in Private Loans ¹	Advances to Gov't. ²	Note Issue, Dec. ³	Increase in Note Issue
1937	2,211	1,471	597	1,640	—
1938	776	225	1,451	2,310	670
1939	1,658	882	2,310	4,290	1,980

¹ Based on the report of the Joint Board of Administration of Government Banks, 1947. Figure for private loans covers the net amount granted in the year, not including agricultural loans. Figure for 1937 is outstanding balance.

² Based on the Statement of Revenue compiled by the Statistical Department of the Ministry of Finance.

³ Based on the statistics of Central Bank of China.

The ratio of private loans to total deposits stood at 66 per cent at the end of 1937, 28 per cent at the end of 1938, and 54 per cent at the end of 1939. Resort to note issue for the purposes of accommodating credit demands of producers was at this time a feature of

the wartime activities of the government banks rather than of private banking.

The rise of advances to the government and the increase in the amount of credit granted to industry were dual stimuli leading to the introduction of large quantities of new money, particularly after 1939. With the temporary suspension of the Shanghai money market in August 1937 and the abnormal conditions in which it operated after that date, private demands for credit did not absorb a very high proportion of the liquid resources of the banks. Advances to the government could be financed partly from deposits. The situation changed in 1939 when the government encouraged expansion of private credit, which soon came to absorb the deposits of the government banks. Nearly the whole of advances to the government were now met by creation of new currency. The government banks were in possession of a large volume of funds other than their deposits: secret reserves of foreign exchange; funds in unrevealed suspense accounts, including sums belonging to the Exchange Stabilization Fund; and tax collections awaiting remittance to the Ministry of Finance. All these resources could have been utilized for the purposes of credit extension without increasing the amount of currency in circulation before 1939. The effect of an excess of private loans over deposits was to diminish the volume of liquid assets held by the banks and to increase the demand on the note issue as a means of financing the budget deficit. However, even the activation of the balances referred to above would have had an inflationary impact by increasing the average velocity of circulation.

Currency Warfare and the Foreign Exchange Rate

In addition to assuming control of the existing financial institutions, the Japanese established a number of puppet banks issuing different kinds of notes when they invaded North China. In December 1937 a Bank of Mongolia was set up in Kalgan, followed by a Federal Reserve Bank of China to act as a Central Bank, opened in Tientsin in March 1938. Two years later a Central Reserve Bank was established in Nanking to regulate the banking affairs of the central and southern coastal provinces. The notes of the Bank of Mongolia were exchangeable with Japanese and Manchukuo currencies. One dollar of Federal Reserve Bank notes was equivalent to one Japanese yen, but was only exchangeable with yen in small amounts. Exchange for yen of sums exceeding FRB \$100 were subject to the approval of the Japanese, and special permission had to be obtained from the Bank of Japan for the purchase of foreign currencies with FRB dollars. Central

Reserve Bank notes were intended to circulate at par with CNC and could not at first be used for the purchase of any other currency. In addition there were two other varieties of currency, military notes and Hua Hsing Commercial Bank notes. In 1938 and 1939 military notes were issued by the Japanese to meet their expenses in Central and South China; these were withdrawn when the new Central Reserve Bank was created. The Hua Hsing Bank was opened in Shanghai in January 1939 for the purpose of issuing a kind of note that could be bought and sold on the foreign exchange market and perform the functions of a trade dollar. The Hua Hsing dollar was intended to exchange at par with CNC and was designed as the unit of account for payment of salaries of civil servants, customs duties, and other taxes. By selling these notes the Japanese planned to accumulate CNC to purchase foreign currencies sold by the Chinese government on the Shanghai market. Excluding military notes, issues of puppet banks in China (Table 7) rose from \$50 million in December 1937 to the vicinity of \$550 million in the same month of 1939.

TABLE 7. NOTE ISSUES OF PUPPET BANKS, 1937-1940
(in thousands, each in its own money)¹

Year	Bank of Mongolia	Federal Reserve	Hua Hsing	Total
Dec. 1937	50,000	—	—	50,000
Dec. 1938	N.A. ²	161,000	—	N.A.
Dec. 1939	N.A.	458,000	5,070	N.A.
Dec. 1940	99,000	715,000	5,650	819,650

¹ Based on data compiled by the Ministry of Finance of Japan, on the subject of currency conditions in occupied areas, 1941.

² Not available.

Operating through their newly developed financial institutions in Occupied China, the Japanese began to wage currency warfare in Free China. They endeavored to intensify inflationary pressures by driving CNC back into the interior, and to undermine the external value of CNC by raiding the foreign exchange market in Shanghai. When the Federal Reserve Bank was created in North China early in 1938 all issues of CNC were to be withdrawn within three months, with the exception of issues of local branches of the Bank of Communications, which were to be eliminated from circulation within a year. By the beginning of 1939 CNC had been entirely removed from circulation in the northern occupied areas. The direct effect of this suppression on price levels in Free China was probably not very great.

If the whole of the stock of CNC in circulation in North China at the beginning of 1938 had been driven back into Free China, the increased volume of currency in circulation over the period of a year would have been about 10 per cent at the most. Under the stimuli of the budget deficit and credit expansion, however, the supply of money in Free China was already increasing considerably faster than this; note issue was expanded by 41 per cent in 1938 and by 86 per cent in 1939. Hence, although the gradual seepage of CNC from occupied regions must have affected internal price levels in Free China, this factor was of secondary importance when viewed against the background of other inflationary influences at work in the early years of the war. The second aspect of the currency war, its impact on the foreign exchange rate, may now be examined.

During the first six months of the war the Chinese government continued to sell unrestricted amounts of foreign exchange at fixed rates as provided in the currency reform plans of 1935. Government leaders adhered to this policy because they doubted their ability to administer exchange controls and believed that such measures would be interpreted by the foreign business communities in China as unwarranted interference in their business affairs. The government, therefore, entered into a gentlemen's agreement with the foreign banks to hold the exchange rate near the existing level and to prevent a disturbing flight of capital from China. Forward buying and selling of foreign currencies was eliminated. The financial authority believed that patriotic sentiments would restrain people from buying foreign exchange in order to transfer funds to safe depositories abroad. Until March 1938 the government policy was effective; the foreign exchange rate remained virtually unchanged (see Table 8).

In March 1938 the Japanese set up the Federal Reserve Bank and announced that within twelve months all CNC would be withdrawn from circulation in the northern areas of the occupied territories. This move threatened to deluge the Shanghai market with national currency seeking expatriation. Meanwhile the Minister of Finance discovered that there was little substance in the idea that people would abstain from buying foreign exchange; the demand for flight capital was growing daily. From August 1937 to February 1938 the government lost sterling 10 million, or nearly one-fifth of its reserve of foreign currencies. Moreover, Free China was not receiving the full benefit of sales of foreign exchange since the Japanese war around Shanghai obstructed the shipment of imported goods to Nationalist-held regions in the interior. Consequently, the government decided to restrict the amount of foreign exchange offered for sale, and after

TABLE 8. THE FOREIGN EXCHANGE RATE AND INTERNAL PRICE LEVELS, 1937-1939

		Foreign Exchange Rate ¹ (CNC per U.S. \$1)	Per cent Increase in Foreign Exchange Rate	Per cent Increase ² in Wholesale Prices (All Free China)
1937	June	3.41	—	—
	Dec.	3.42	8	7
1938	June	5.40	58	17
	Dec.	6.40	19	22
1939	June	7.80	22	32
	Dec.	14.48	85	49

¹ Based on tables of quotations of U.S. dollar compiled by the Economic Research Department of Central Bank of China.

² Taken from tables of monthly statistics compiled by Directorate-General of Budgets, Accounts and Statistics of the Republic of China.

³ Negligible increase.

March 14, 1938, the Central Bank assumed control of all buying of foreign currencies. There was a prompt fall in the external value of the currency, and by the end of the year CNC had depreciated 87 per cent against the U.S. dollar.

Throughout 1938 the Japanese exploited the Shanghai market by accumulating CNC in North China and using it to buy foreign exchange to finance imports of cotton for Japanese mills in Shanghai and other essential commodities for re-export to Japan. The Nationalist government was cognizant of these tactics but felt itself compelled to support the Shanghai market, the alternative being rapid depreciation in the external value of CNC. Early in 1939, with the founding of the Hua Hsing Bank, the Japanese made a strong bid to capture the foreign exchange market in Shanghai from the Chinese government by making Hua Hsing notes the main circulating currency. Two months later, however, the Central Bank of China, together with the British banks, participated in a scheme to stabilize the external value of CNC. The Sino-British Stabilization Fund was established to operate in the exchange markets of Shanghai and Hong Kong. The demand for foreign currency was mounting rapidly at this time. Confidence in the currency was shaken by a succession of Chinese military reverses, and the Japanese were flooding the market with CNC. The Fund's resources were not designed to withstand these abnormal strains, and it was compelled to suspend operations twice in July to allow the market to settle at a new rate. Toward the end of the

year the Fund was greatly assisted by windfall gains accruing from the appreciation of CNC against sterling with the outbreak of war in Western Europe, and by a flight of foreign capital from Hong Kong, Malaya, and the Dutch East Indies to Shanghai provoked by the imposition of exchange controls in those places. During 1939 wholesale prices in Free China rose by 81 per cent, those in Chungking by 64 per cent, and those in Shanghai by 158 per cent; but the external value of the national currency fell by only 47 per cent against sterling, and 56 per cent against the U.S. dollar.

Thus the long standing of CNC in the foreign exchange market and the measures for stabilization undertaken by the Chinese government in conjunction with the foreign banks frustrated the efforts of the Japanese to bring about a rapid depreciation in the external value of CNC and protected it against the competition from Hua Hsing notes. The basic strength of CNC derived from its convertibility into other currencies. The notes of the puppet banks lacked this essential attribute. They could not be converted into foreign exchange, nor were they accepted by the foreign banks in Tientsin and Shanghai. Although the exchange rate was influenced considerably by the subversive tactics of the Japanese, the government succeeded in preventing the exchange rate from rising uncontrollably from mid-1938 until the end of 1939.

The Inflationary Process

Only those events affecting the general level of prices which occur independently of the inflationary process itself can be considered as causes of inflation. For example, government spending may increase merely as a result of higher costs accompanying an upward movement in prices, in which case it should not be considered as an independent variable in the inflationary process. If, however, government spending increases independently of prices as a result of an exogenous factor such as the outbreak of war, it may be properly regarded as a basic cause of inflation. In attempting to explain inflation in China, therefore, we must examine (1) the factors setting the inflationary process in motion in the early stages, (2) the additional factors aggravating inflation in the later stages and arising independently of the inflationary process, and (3) the characteristics of the process itself. In this third respect, we shall be concerned with the responsiveness of the economy to inflationary pressures.

In a majority of instances, inflation in war and postwar periods has resulted from an initial rise in government demands on the national output beyond what could be satisfied by increased production plus

imports. The rise in government demand has frequently been accompanied at a later stage by increasing pressure of investment and consumer demand. The situation in China was somewhat different. By the end of 1938 the enemy had overrun regions producing some 50–55 per cent of total output, and imports to Free China were falling. This abrupt reduction in supply was a prime cause of inflation. On the demand side, there was a failure of total demand to adapt itself to the reduced volume of goods available. Compared with the prewar period, government demand taken as the real value of government spending was down by 6 per cent in the second half of 1937 and 30 per cent in 1938, although the geographical area under government control had fallen by an even greater percentage. Private investment demand, however, was probably higher than prewar in both monetary and real terms. In 1939 the monetary value of government bank credit granted to private business was 306 per cent above that of 1938, and 182 per cent higher in real terms. These changes on the demand side assume a much greater significance when they are related to the reduction in available supplies. A fall of only 30 per cent in government demand in the face of a 50 per cent drop in supply leaves much the same inflationary gap as an increase of 20 per cent in government demand with a constant supply. Thus the carry-over of a high rate of government spending into the comparatively restricted area of Free China and the huge credit expansion encouraged by the government were potent inflationary forces.

The third component of total demand—consumer demand—was of less inflationary significance. Because of the flight of refugees from the coastal provinces the population of Free China may have risen from a prewar 180 million to 230 million by the middle of 1940, locating about one-half of China's total population in Free China. At first sight this rise in the consuming population may be thought to be of more significance than the pressure of government and investment demands since these latter demands are small relative to consumer demand in underdeveloped countries. However, between 55 per cent and 60 per cent of China's prewar agricultural output was produced in the provinces of Free China, crop yields in 1938 and 1939 were good, and the inflow of population took place gradually over a three-year period. Judging by the moderate rate at which food prices rose until the second half of 1939, the movement of population was not of primary inflationary importance in the early years. Of the other two demand factors, the government deficit was the main cause of inflation in the first six months of the war, the expansion of

credit becoming significant after the government adopted a very liberal credit policy in the middle of 1938.

The fall in total supply and the relative shift of productive resources to government and investment uses provided the primary basis for inflation in China. On the monetary side, the budgetary deficit and credit expansion caused large increases in the currency supply, as can be seen from Table 9. In the first year of war the

TABLE 9. INDICATORS OF CHINESE INFLATION, 1937-1939

(Base of all indexes, Jan.-June 1937 = 100)

Period	Gov't Deficit ¹	Note Issue ²	Wholesale	Import	Foreign
			Prices (All Free China) ³	Prices (Chungking) ⁴	Exchange Rate: CNC- U.S. \$1 (Shanghai) ⁵
1937 June	100	100	102	91	100
Dec.	148	116	109	147	100
1938 June	208	123	127	227	158
Dec.	239	164	155	389	187
1939 June	240	209	205	501	228
Dec.	336	304	306	1,054	424

¹ The deficit of the first half-year of 1937 was based on revenue excluding the proceeds of Consolidation Bonds; the proportion of deficit between first half-year and second half-year is 5 to 7.

² Based on the statistics compiled by Central Bank of China.

³ Taken from tables of monthly statistics compiled by Directorate-General of Budget, Accounts and Statistics.

⁴ Taken from tables of monthly statistics compiled by the Economic Research Department of Central Bank of China.

⁵ Based on tables of quotations of U.S. dollar compiled by the Economic Research Department of Central Bank of China.

note issue lagged behind the government deficit. This discrepancy is partly accounted for by relatively large sales of foreign exchange and government bonds, which offset a third of the deficit for 1937-1938, and partly by the existence of idle funds in the hands of the government banks immediately after the outbreak of war. From the second half of 1938 through 1939, however, new currency issues approximated the deficit because of the expansion of private credit. It is worth observing here that the increase of notes in circulation in Free China was greater than the rise in the note issue. The volume of currency in circulation was also swollen by funds brought into Free China by refugees from the eastern provinces, and by sums

transferred by people living in North China after the suppression of CNC.

Shortages caused by the reduction of supplies and the increased demands of the government and private entrepreneurs were most serious in a specific range of capital goods and in raw materials for industrial production. It is true that foodstuffs for provisioning the army comprised the bulk of government demand, but the comparatively slow rise in food prices in 1937 and 1938 indicates that government requirements were not excessive relative to supply in this early stage. The remainder of government demand and the whole of investment demand were concentrated on capital goods, and prices of these goods rose enormously. For instance, by the end of 1938 the price index for metals and electrical goods in Chungking had increased three and a half times as much as the general wholesale price index. As illustrated by the indexes in Table 8, import prices also advanced at a faster rate than other prices.

Prices of imports reacted to changes in the rate of foreign exchange as well as to internal conditions of supply and demand. The exchange rate rose much more rapidly than internal prices in the middle of 1938 and again at the end of 1939. On both occasions (see Table 7) the Chinese government was unable to keep the exchange rate in line with internal prices as a result of Japanese currency warfare and the flight of capital from Shanghai. Except for these two periods, however, the exchange rate increased more slowly than other prices and was not a source of inflation. Thus the inflation of the early war years was manifested largely in the rise in the prices of raw materials and manufactures, with prices of agricultural commodities responding slowly to over-all inflationary trends. The loss of imports and industrial productive capacity, the government deficit, and the expansion of private credit were of prime importance in generating this effect. The gradual growth of consumer demand in the provinces near the fighting front and the two major variations in the foreign exchange rate tended to aggravate these basic causes.

Stabilizing Influences

At the start of the war Free China was confronted with a formidable array of potentially inflationary conditions. Yet the increase in the general level of prices lagged far behind the deficit and the expansion of the supply of credit and currency until the closing months of 1939. Thus it was two years before the inflationary process was set in motion and all prices began to rise as fast as, or faster than, the government deficit and other initiating factors.

A number of circumstances account for the economy's relatively slow response to inflationary pressures. Perhaps most important of all, the economic base of Free China became the predominantly rural sector of the interior, where prices showed less sensitivity to inflationary stimuli than in the urban sector. The supply situation was considerably eased by the development of alternative lines of communications with the outside world after China's seaports had fallen to the enemy. Before communications with Hong Kong were severed at the end of 1938, the Chinese government began the construction of a railway with a total length of 644 miles from Hunan Province, through Kwangsi, to connect with the terminal of the Indo-China railway at Chennankwan. By dint of prodigious efforts the first section of 224 miles from Hengyang to Kweilin was built in eight months at the record speed of one kilometer per day. In 1939 the project was more than half completed and a connection was established between the Hunan-Kwangsi line and the Hankow-Canton system. Japanese penetration of Kwangsi prevented the completion of the 304-mile stretch to the Indo-China border, but the finished section greatly facilitated the movement of goods brought by road from Indo-China in addition to playing an important role in the evacuation of Hankow and Canton. The construction of the Burma Road from Kunming in Yunnan Province to Wanting on the Burma border was also a significant achievement. This road, with a distance of 600 miles traversing some of the most mountainous country in China, was built by an army of 160,000 workers in eight months, and at the end of 1938 the highway was opened to traffic. China received a revivifying flow of foreign goods by way of the Burma Road, and in the first half of 1939 import prices rose less than other prices for the first time since hostilities had begun. These counterblockade measures partly overcame the difficulties caused by the loss of sea, rail, and river communications.

However, there were more important reasons for the slow progress of inflation in China. Basically, the rate at which prices increase in a time of war inflation is determined by three factors: the extent to which the supply of consumer goods is dislocated by the conditions of war; the responsiveness of consumer incomes to rises in the cost of living and to the creation of new means of payment; and the public's propensity to consume, i.e., the proportion of total income spent for consumption. Each of these factors may be examined in turn.

The supply of consumer goods in Free China was not greatly curtailed in the first two years of war, either by the loss of the eastern provinces or by additional government and investment

demands on total output. Consequently, the cost of living index rose slowly in comparison to prices of producer goods. Although the Japanese occupation had seriously interrupted supplies of manufactured consumer goods in Free China, large stocks of clothing and other consumer items had been transferred to the interior at the outbreak of war by the merchants of the coastal cities. These stocks moderated the influence of the reduction in imports on prices, an effect that was prolonged by the postponable nature of consumer demand for semi-durables. Items such as housing space became scarce in districts inundated with refugees, but this experience was by no means general. Besides, the average Chinese was content with improvised shelter, and there was no marked jump in housing costs. Foodstuffs, the most important component of consumer expenditure, were in relatively abundant supply as agricultural production increased in Free China. Output in fifteen provinces of Free China in 1938 and 1939 was 8 per cent above the average of the seven prewar years 1931-1937. The failure of the Japanese campaign against Changsha enabled Free China to continue to draw products from the fertile rice fields of Hunan. From the point of view of the progress of inflation, therefore, the move from the urban coastal section to the more rural interior was auspicious.

Turning to the additional wartime demands for consumer goods, we note that government spending and private investment activities did not involve a very great diversion of products from consumer markets or of resources from the production of agricultural commodities in Free China prior to 1940. Government expenditure was not a very large component of total market demand. According to estimates of China's national income for a number of prewar years, it appears that the total expenditures of the central government in 1936 did not exceed 5 per cent of the gross national product.* On the basis of a rough estimate, government spending had increased to 12 per cent of the gross national product of Free China by 1938 after allowance for a 50 per cent loss of productive capacity to the Japanese. In 1939 government spending fell to 9 per cent of the national product of Free China. Hence, although government demands on output in Free China were highly inflationary in the longer period, since no attempt was made to reduce the competing claims on output by private investors and consumers in the early years, the general level of prices responded slowly to the deficit because of the relatively limited scope of government activities. Moreover, much of government and all of investment spending were directed toward a specific

* Liu Ta-chung, *China's National Income, 1931-1936*, Washington, D.C., 1946.

range of capital goods. The provisioning of the Chinese armies, which were spread over a very large area of the country, did not present a major problem for the government while harvest yields were high. Where the provisioning of troops or government construction workers led to shortages of foodstuffs, they tended to be confined to particular geographical regions because of the lack of communications. For example, the government amassed a large number of workers in Yunnan to construct the Burma Road, causing a scarcity of foodstuffs in that province. But, in view of high transport costs, prices had to rise very greatly before it became profitable to transship foodstuffs to Yunnan; this prevented the spread of shortages to other provinces.

However, the supply of agricultural products could have been affected by the diversion of manpower from rural production to military and strategic occupations. Government and private investment activity in the interior implied a demand for industrial labor, which, for a number of reasons, had only a very gradual effect on the supply of farm workers. Despite the rapid wartime expansion of manufacturing and mining in Free China, the additional industrial workers required amounted to a small fraction of the total labor force. The government made provision for the evacuation of large numbers of foremen and factory workers from the industrial centers of the coast to facilitate the growth of industry in the interior. It was estimated by the Ministry of Economic Affairs that 50,000 experienced factory workers had been resettled in Free China by the end of 1940. Thus the transfer of workers from agricultural to industrial employment was not of great magnitude. Nor did the government's military recruiting campaign make serious inroads into the farm population in these early years, although recruitment in regions in the vicinity of the fighting fronts and of the war capital led to localized labor shortages. Lastly, the inflow of refugees to Free China and the high degree of concealed underemployment in agriculture softened the impact of government and industrial demands on the supply of farm labor. Again, the fact that the war effort was now focused on the rural sector, with some additions of equipment, skilled labor, and products brought from the prewar industrial sector, provided unplanned advantages.

A second major stabilizing influence on the Chinese economy was the slow adaptation of incomes of major consumer groups to rises in the cost of living and the increased supply of money. To appreciate the significance of this factor it is necessary to refer briefly to the working of the inflationary process. The initial rise in prices resulting

from the additional government and investment demands of a war period frequently causes a shift in the distribution of incomes in favor of merchants, manufacturers, and owners or producers of capital goods. Other income groups—laborers and salaried workers—are not prepared to accept this loss of real income and may eventually obtain wage increases through more or less forceful bargaining methods. Consumers, the government, and industry then compete to retain their share of the product of the economy's total economic resources, and further price rises occur, a process which leads to the familiar wage-price spiral. The rise in incomes of wage and salary earners following the rise in the price level is the mechanism by which a continuous increase in prices is generated. The fuller the degree of adjustment of wages and salaries to prices, and the more frequently these adjustments are made, the faster is the rate of increase of prices emanating from an original rise in the cost of consumption goods.

As might be expected, wages in China were not adjusted to the cost of living as fully as they would have been in a more highly industrialized economy. This was not the result of a lack of bargaining power on the part of Chinese workers. The absence of the trade unions of Western societies was more than compensated for by the solidarity of the workers deriving from their social organization. The principal reason for the sluggishness of wages was a sense of patriotism that restrained the demands of workers. Their ignorance of accurate measures of cost of living increases may also have been a factor. The scanty information available suggests that wages lagged behind the cost of living in the first years of the war. But in Chungking itself, in 1938, the wages of industrial workers, both in and out of factories, moved more rapidly than the cost of living, which for a time remained quite low; but, on the whole, these wages too seem to have fallen behind by 1939. Information relating to the wages of agricultural workers in Szechwan suggests that rural wages rose faster than the cost of living in both 1938 and 1939. This condition, however, probably was not typical for Free China as a whole, since army recruitment and the use of large numbers of coolies on construction work and in human transport services encroached on farm labor supplies to a greater extent in Szechwan than in most other provinces.

While it is appropriate to regard the level of wages as the basic determinant of consumer income in a mature economy, in China other sources of income must be taken into account. Since the major part of the consuming population of China, particularly in rural-based Free China, consisted of small peasant proprietors and tenants, the prices demanded by farmers for agricultural products

were the most important factors influencing consumer incomes. Because of ignorance and distance from the market, farmers did not react quickly to the high prices they found themselves paying for manufactured goods. Thus, in these early stages of the war, wages, salaries, and agricultural returns must have lagged some way behind the general level of prices. Evidence is found in the fact that food prices did not rise as fast as the cost of living, which included the increased prices of manufactured goods. It was not until peasants grasped the full import of inflationary trends and began to bargain for higher prices for their products that a true sequence of related rises in prices and incomes, corresponding to the wage-price spiral of a more highly organized industrial economy, made its appearance.

The third source of inertia was overcome only gradually by inflationary pressures. In the first eighteen months of the war the propensity to consume was curbed by an increase in the demand for money for the purpose of hoarding. In the climate of uncertainty created by the war, money became the most convenient and secure form of storing wealth, and there was a general movement on the part of the public to hold assets in liquid funds. This preference for money prevailed until the public began to view the depreciation of the currency as inevitable. Some restoring of money to circulation by informed groups in the business community took place after the sudden fall in the external value of the currency in March 1938, but the comparative stability of the foreign exchange rates during the next six months was still conducive to hoarding. However, when the fall of Hankow and Canton in October 1938, the severe reverses suffered by the Chinese armies early in 1939, and the gathering momentum of internal price rises undermined confidence in the currency, hoarding of money was abandoned in the cities in favor of hoarding goods. In the more isolated provinces hoarding of money continued somewhat longer. Among the peasantry there had always been a shortage of money income relative to needs for manufactured goods. Consequently, as prices of agricultural products rose and no more manufactured goods became available, additional funds received by the farmers tended to be hoarded for future spending. For a period at the beginning of the war, therefore, the disappearance of money into private hoards was an important factor relieving the pressure of demand for consumer goods.

It can be seen, then, that the slow generation of inflation in Free China was caused by three important lags: the lag in the cost of food and consumer goods behind general price levels; the lag in wages, salaries, and agricultural incomes behind the cost of food and consumer

goods; and the lag of consumer spending behind income. All of these lags resulted in large part from the fact that China's war economy was principally based on the rural sector. The respective causes of these lags may be summed up as follows. (1) Considering Free China in isolation, the loss of production and imports occasioned by the Japanese occupation of the coast was small in relation to total output available to meet the normal pattern of consumer demand in these areas. Further, the additional government and investment demands imposed on the economy, though very great in relation to the available supply of capital goods, were small in relation to the total output of consumer goods in Free China, particularly since agricultural production expanded appreciably in the first two years of the war. Hence the supply of consumer goods was not severely disrupted, and the cost of living rose moderately. Large buffer stocks of manufactured consumer goods transferred to the interior at the outbreak of war were also important in meeting increased consumer demand. (2) Wages, salaries, and agricultural incomes were largely determined by agricultural prices which did not rise as fast as the cost of manufactured goods. (3) The government policy of maintaining the foreign exchange rate helped to preserve the public's confidence in the currency early in the war. During this period the consumers' general desire for liquidity was expressed in the hoarding of money. It should also be noted that commodity hoarding would have been difficult in the conditions of the rural economy, where centralized markets were rare.