

## Inflation in Eastern China during the Second Sino-Japanese War

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**Abstract.** Although the history of the Japanese invasion of China is well-known and well-taught in China, the history of the currency war between China and Japan during the time is far less known. From 1937-1945, China and Japan engaged in not only a military war but also a "currency war." Japan, in an attempt to generate funds for the war from the war itself and to overthrow the Chinese government, attacked China's currency, the fabi (meaning "legal tender"), by printing counterfeit fabi notes and establishing "puppet" banks in China to issue mass amounts of puppet currencies to displace the fabi. These counterfeit notes and puppet currencies quickly circulated into the economy and led to a period known as the Great Chinese Inflation. Both the Nationalists (the governing party) and the Communists immediately took different actions to control inflation and the influx of counterfeit notes. The inflation was widespread not only in Nationalist and Communist-controlled areas, but also in Japanese-occupied areas of China.

**Keywords.** China, Hyperinflation, Inflation, Second Sino-Japanese War, World War II.

**JEL.** N15, N25, N45.

### 1. Introduction

July 7, 1937 marked the beginning of the Second Sino-Japanese War. Using as an excuse the Marco Polo Bridge Incident, a skirmish between Japanese and Chinese troops near Beijing, the Japanese army attacked northern China. By the end of 1938, it occupied Nanking (Nanjing), the capital of China at the time; major cities such as Peking (Beijing), Canton (Guangzhou), and Wuhan; and most of northeastern China. By 1945, it occupied almost the entire eastern half of China. However, in areas of northern China bordering the Bohai Gulf and the Yellow Sea, the Communists set up anti-Japanese strongholds where villagers were mainly under Communist rule. The remaining land remained under Nationalist control.

The Nationalists and the Communists did form an alliance to fight the Japanese. However, the Nationalists still viewed the Communists as a threat, and rarely consulted the Communists. Nevertheless, the Communists accepted any economic regulations that the Nationalists passed, and tried their best to help stabilize China's economy and fight off the common enemy. When the Communists passed regulations in the

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Communist anti-Japanese strongholds, the Nationalists likewise neither supported nor suppressed them.

After the start of the Second Sino-Japanese War, the Japanese began to take measures to weaken China economically. They had several goals: to “fuel war with warfare” and make the war pay for itself, obtain all of China’s offshore funds, alter the exchange rate of the Chinese fabi to the yen, and overthrow the Chinese government after causing the collapse of the currency. During that time, the official Chinese currency, the fabi, literally translated as “legal tender,” was the only currency available for foreign exchange. So, instead of simply destroying the fabi, the Japanese occupation force decided to obtain as much fabi as possible and exchange all of it. To do so, it printed enormous amounts of counterfeit fabi notes. It also set up “puppet” banks in China that issued their own regional currencies as a way of decreasing demand for fabi. As a result, the fabi depreciated quickly, causing a period of hyperinflation that lasted until the end of the war.

This paper focuses on the relationships between the amount of bank deposits and currency issued or circulated and inflation and exchange rates. The trends of statistics gathered from Japanese-occupied areas, Communist-occupied areas and Nationalist-occupied areas are compared and discussed with regard to the policies or regulations that the party had taken. No conclusion is made as to whether or not the actions taken were rational or correct. However, when compared, the analysis does reveal the effectiveness of different policies.

## 2. Situation before the War

In the early 1920s, China was a country that controlled neither its own territory nor its trade. After signing the so-called Unequal Treaties of the 19<sup>th</sup> and early 20<sup>th</sup> centuries, Hong Kong was under British sovereignty, Macao was under Portuguese sovereignty, Taiwan was a Japanese colony, and Russia had significant influence in northern Manchuria. The ports of Weihaiwei and Kwangchowwan (Guangzhouwan) were respectively leased to Britain and France, while Japan had leases in Port Arthur (Dalian). Several other cities, notably Shanghai, had foreign concessions – zones outside of Chinese jurisdiction where the police and courts were run by foreign powers. Foreign trade was subject to certain provisions imposed by the duress in the Unequal Treaties, and China’s Maritime Customs Service, a Chinese governmental tax collection agency that collected a large proportion of government revenue, was largely staffed at senior levels by foreigners. The Nationalist Party rose precisely because of its belief in abolishing the Unequal Treaties and foreign management of Chinese territory and customs duties. It overthrew the government in Peking in 1927, reunifying most of China. Chiang Kai-shek, the leader of the Nationalist Party, set on the path to secure China’s welfare and economic power. Recognizing the need for a modern financial system, the government created the Central Bank of China with headquarters in

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Nanking in 1928. However, the Bank of China and the Bank of Communications, created by the Peking regime, were allowed to continue issuing notes. In addition to those banks, many cities or provinces had local banks that also issued notes, often denominated in a unique local currency. In the foreign concessions, branches of Western and Japanese banks issued notes that in some cases circulated extensively in a region because of their historical presence and perceived trustworthiness.

The Nationalist government called on the period's leading "money doctor," Princeton University professor Edwin Kemmerer, to bring the Commission of Financial Experts to China for a year's service in 1928. The Kemmerer Commission's report said that China had "unquestionably the worst currency to be found in any important country" (Young 1971: 163). The coins, weights and paper money used varied from city to city, and national, provincial and private authorities each issued different types of currency. This made conversions between currencies difficult, as there was no official exchange rate and rates were solely decided by banks. Copper was widely used in everyday life, but China was regarded as a silver standard country because it used silver in banks and in the foreign exchange market. There was a myriad of types of silver dollars as well. Spanish Carolus dollars, American and British dollars, Japanese and Saigon dollars, and Mexican dollars, each coined at foreign and Chinese mints, were all in use. Lack of a uniform currency hampered arbitrage and contributed to price variations in different parts of China.

The Kemmerer Commission recommended China to leave the silver standard and adopt the gold standard. However, the plan was never carried out because of the onset of the Great Depression. China experienced deflationary pressure in 1931 as Britain and a number of other countries went off the gold standard, increasing the foreign exchange value of China's silver currency. Furthermore, Japan's seizure of Manchuria in 1931 and its attack on Shanghai in 1932 cut off China from provinces with key agricultural and natural resources. There was however a counteracting factor, the depreciation of silver against gold in world markets. Chiang had been planning a currency reform since 1929, and seeing the situation, decided that it was a good time to implement the reform in the end of 1932. A new Central Mint would coin silver into the "new silver dollar," the new official currency used in the foreign exchange market.

Influential forces in the United States believed that the slump in the price of silver harmed U.S. trade with China and other Asian countries. The buying power of countries with a silver-based currency such as China and India would be affected, so it was reasonable to help the countries by raising the price of silver. Conveniently, such a policy would also help the politically influential U.S. silver mining industry. Despite China's disapproval, the United States enacted the Silver Purchase Law on June 21, 1934. The act directed the U.S. Treasury to purchase silver until it reached one quarter of the Treasury's combined stock of silver and gold. The price of silver began to soar. Seeing that its silver stock was almost depleted, the

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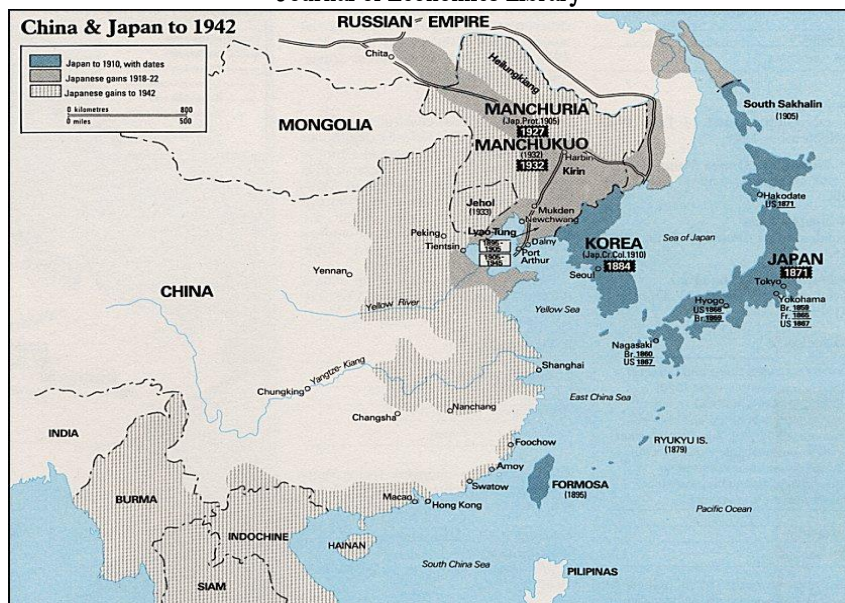
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Chinese government abandoned the free silver standard in 1935 and imposed a duty on the export of silver. That still did not help with the grim situation in China. Thus, Chiang decided that a more complete currency reform was necessary. In order to obtain the necessary capital needed for a complete currency reform, the Nationalist government, with the agreement of the United States, sold all its silver reserves to the United States. On November 4, 1935, the Central Bank of China, Bank of China and Bank of Communications began to issue China's new currency, the *fabi*, officially abolishing silver as the monetary standard. The Central Bank of China became a Central Reserve Bank, and established more branches in different parts of China. By 1937, the use of the *fabi* extended to southern China and it had become the unified currency of the country.

The situation in Manchuria was different. In 1931, Japan had established the puppet state of Manchukuo after gaining sovereignty over Manchuria, an area that already issued its own currency. The currency became a form of silver exchange currency related to the silver dollar, but after China took itself off the silver standard, the currency was tied to the yen. In 1932, the government of Manchukuo established the Central Bank of Manchou to issue the Manchukuo *yuan* and replace all currencies previously used in the Manchukuo area.

The foreign ports of China were affected by China's abandonment of the silver standard. Less than a month after China introduced the *fabi*, Hong Kong, which had no central bank, established a currency board to link the Hong Kong dollar to the pound sterling. The *fabi* was initially tied to sterling in practice, so Hong Kong's policy preserved exchange rate stability with mainland China. Similarly, Macau switched the anchor of the Macanese *pataca*, issued by the Portuguese Banco Nacional Ultramarino, from silver to the Portuguese *escudo*. The *escudo* was in turn tied to the pound sterling. In the British concession of Weihaiwei, there was no unified currency and all currencies could be used, including the Hong Kong dollar. In the foreign concessions, branches of foreign banks switched to the *fabi* to preserve their integration with the Chinese financial system.

The next page shows a map of China in 1942. The areas with a pattern are Japanese-occupied areas, the rest are Nationalist-occupied. Communist-occupied areas are dispersed throughout, and would look like little dots along, the borders of the stripe region.



Map 1. China and Japan to 1942

Table 1. Chronology

1894-1895	First Sino-Japanese War; China loses and cedes Taiwan to Japan
1912	Republic of China replaces last emperor of Qing Dynasty
1921	Communist Party is officially established
1926-1928	Chiang Kai-shek's Northern Expedition reunifies China under the rule of the Republic of China with capital in Nanking
1928	Chiang Kai-shek's government creates the Central Bank of China
1931	Japanese invasion and conquest of Manchuria
1935	China officially abandons the silver standard
1937, July 7	Marco Polo Bridge Incident begins Second Sino-Japanese War; Japanese forces quickly gain occupies eastern China and Manchuria
1937, November	Republic of China's capital is moved to Chungking
1938, March 10	Japan opens the Federal Reserve Bank of China, a "puppet" bank to issue currency in recently conquered parts of China
1941, January	Japan opens Central Reserve Bank of China as a puppet issuer for central and southern China
1941, December 7/8	Japan launches World War II in the Pacific (the Pacific War), which includes the occupation of foreign concession zones in China
1945, September 2	Japanese surrender ends Second Sino-Japanese War and World War II; civil war arises between Nationalists and Communists
1949, October 1	Victorious Communists proclaim People's Republic of China

### 3. Overview of issuing banks in different zones of occupation

Table 2 lists the major Nationalist, Communist and Japanese banks that issued notes from 1937-1945 and describes some of their major features. The four Nationalist banks were all government banks. The Communists established many more banks, but most were small, so only two of the more influential ones are listed below and examined here.



**Table 2.** *Major Note-Issuing Banks in Eastern China during the Second Sino-Japanese War*

Name	Affiliation	Headquarters	Notes Issued	Dates	Influence/Branches
Central Bank of Manchukuo	Japanese	Hsinking (Changchun)	Manchu-quan	1932-1939	Manchukou and northern China
Meng Chiang Bank	Japanese	Zhangjiakou	Mengchiang-quan	1937-1945	Inner Mongolia
Central Reserve Bank of China	Japanese	Peking (Beijing)	Lianyin-quan	1938-1945	Northern, Central and South China
Huaxing Commercial Bank	Japanese	Shanghai	Huaxing-quan, Chubei-quan	1939-1940; 1940-1943	Anhui Province, Central China
Federal Reserve Bank of China	Japanese	Nanking (Nanjing)	Zhongchu-quan	1941-1945	Central and southern China
Bank of Shansi, Chahar and Hopei	Communist	Shuizhuizhen	SCH-quan	1938-1948	Northern China
Bank of Huainan	Communist	Xiejiaji	Huainan-bi	1942-1945	Central China
Bank of China	Nationalist	Shanghai	Fabi	1935-1945	Nanking, leading cities in China
Bank of Communications	Nationalist	Shanghai then Chungking (Chongqing)	Fabi	1935-1945	Nanking, leading cities in China
Central Bank of China	Nationalist	Shanghai	Fabi	1935-1945	Nanking, leading cities in China
Farmers Bank	Nationalist	Hankou then Chungking	Fabi	1935-1942	Central and southern China

**Note:** The table excludes Hong Kong (where three note-issuing banks acted as agents for the Exchange Fund), Macau (Banco Nacional Ultramarino), and Taiwan (Bank of Taiwan). It also excludes Western banks that issued in foreign concession areas until 1941 but then ceased; a host of small local Chinese issuers; and the western regions of Tibet (Tibetan government issue) and Sinkiang (Xinjiang) (local issue by a Soviet-backed government).

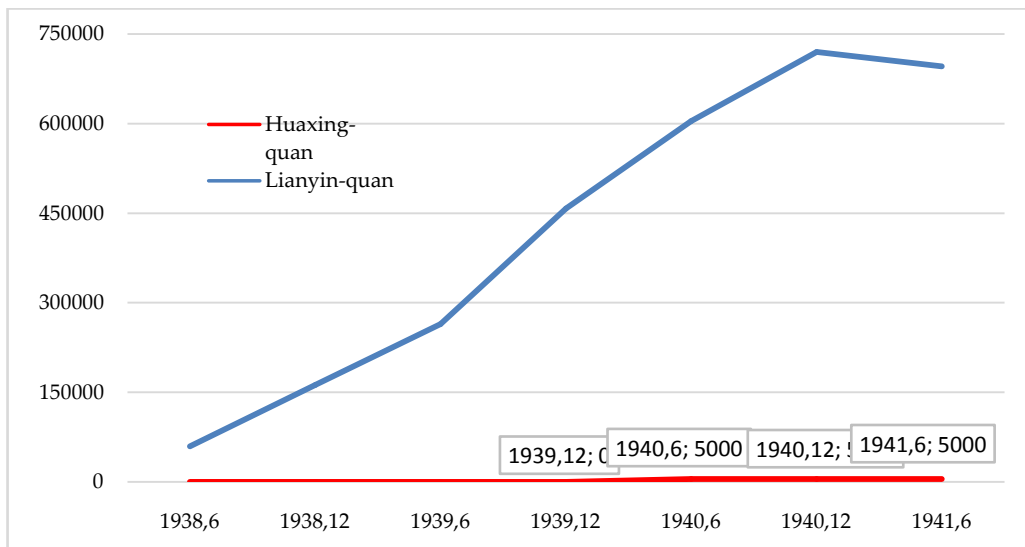
#### 4. Policies and statistics in Japanese-Occupied areas

Since Japan occupied the majority of northern China by the end of 1937, the Japanese government decided to set up its first puppet bank in Beijing. On February 5, 1938, the outline for the Federal Reserve Bank of China was published. The bank would stabilize the yen, control China's financial markets and issue bank notes called lianyin-quan (meaning "Federal Reserve Bank note"), which had the same value as the fabi and was pegged to the yen in the foreign exchange market. Branches would be set up in other major cities of China and would be allowed to issue the lianyin-quan as well. The Japanese hoped that they could thus acquire large sums of fabi and even bring northern China under one united currency: the lianyin-quan.

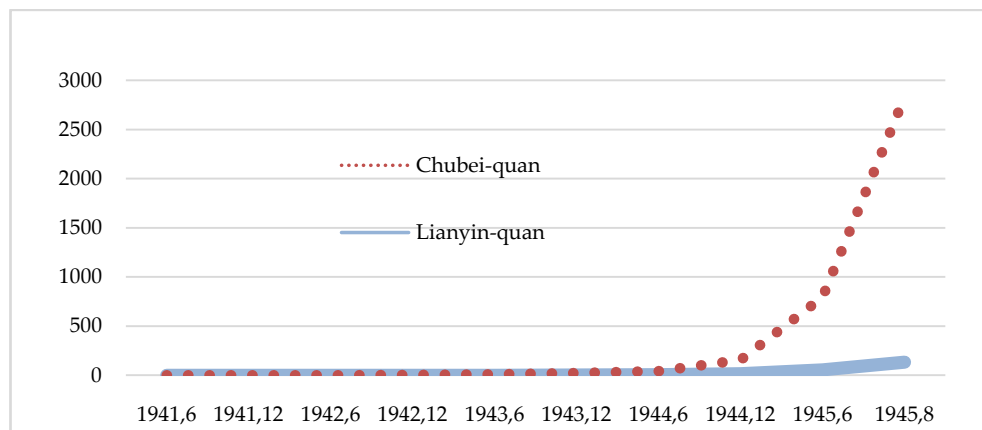
On March 10 of the same year, the Federal Reserve Bank of China opened for business. The very next day, the Japanese government banned the use of the fabi, and three months later, banned the use of bank notes issued by most major banks in northern China. On August 7, the fabi and lianyin-quan could no longer be exchanged at an equal rate: 100 fabi were officially only worth 60 lianyin-quan. By the end of 1941, though, the amount of lianyin-quan issue increased drastically to match the fabi's depreciation. As other parts of China experienced inflation, the Japanese-occupied areas that used the lianyin-quan experienced it as well.

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In central China, the Huaxing Commercial Bank was established in 1939 by the Weixin government, a Japanese puppet government. Its functions were identical to those of the China Joint Reserve Bank. From 1939-1940, it issued the huaxing-quan, and from 1940-1943, it issued the chubei-quan (meaning “reserve note”). The huaxing-quan was originally set equal to the *fabi*, but on July 20, 1939, the exchange rate was fixed at 1 huaxing-quan to 0.06 pound sterling. The change actually made the huaxing-quan less competitive in international trade, so, to counter that effect, it was soon replaced by the chubei-quan. From 1939-1940, only 5 billion yen of huaxing-quan were issued each year (Nakamura 1994: 333).



**Figure 1a.** *Lianyin- and Huaxing-quan Issued 1938-1941.6 (thousand yen)*



**Figure 1b.** *Lianyin- and Chubei-quan Issued, 1941.6-1945 (bn yen)*

Source: Nakamura (1994: 412).

The names of the puppet banks were on purpose made similar to those of non-puppet Chinese banks. Just by looking at the names, even regular citizens were unaware that these were puppet banks established by the Japanese. The staff serving customers were also all Chinese, although most

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executives, consultants, advisors, and foreign exchange managers were Japanese. However, even after the people realized that these were Japanese puppet banks and were called traitors if they affiliated with the banks, they were willing to make deposits. The puppet banks offered much higher interest rates than other banks, and thus were able to receive more deposits (Shibata 1999: 354). In this way, the Japanese were able to collect huge sums of fabi, and use them for trade with both foreign countries and Nationalist-occupied areas of China.

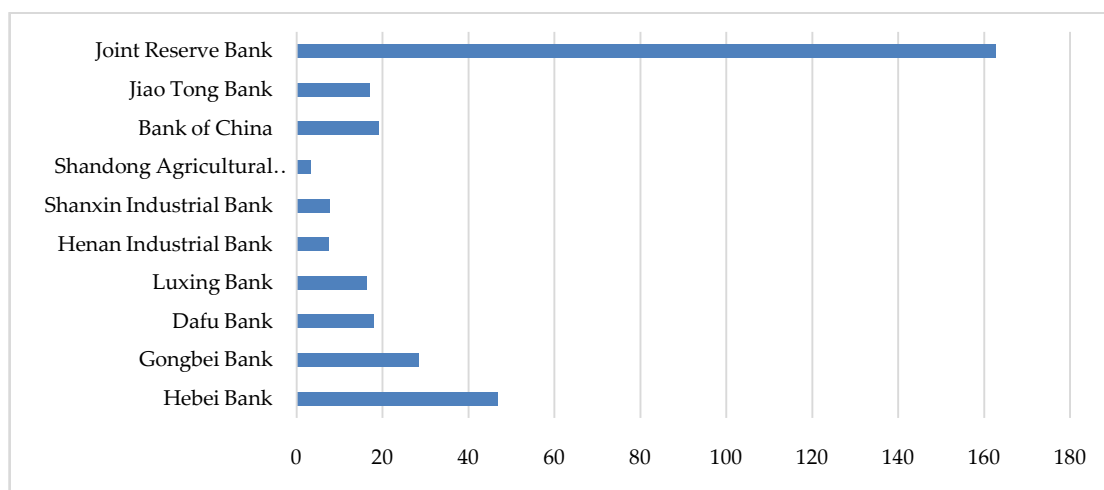


Figure 2. Bank Deposits in Northeast China as of December 1942 (mn yen)

Source: Shibata(1999: 290-292).

In addition to banning the use of fabi and forcing all villagers to exchange their fabi for the puppet currency, the Japanese government also obtained fabi in two ways. First, it smuggled Japanese goods into China and then sold them. During the war, there were not a lot of goods and resources readily available. The smuggled goods were cheaper than usual goods, so Chinese merchants were willing to pay the Japanese, in fabi, for supply of these goods. In general, any goods sold by the Japanese in non-Japanese occupied areas were done so in fabi. The fabi would then be sold in the foreign exchange market.

Second, the Japanese government printed and circulated mass amounts of counterfeit fabi notes into non-Japanese occupied areas. It soon realized that the technology needed to make the fabi note was rather low-quality and was easy to reproduce. In 1939, it began experimenting, and, in 1940, counterfeit fabi notes were mixed in with real ones when trading with Chinese companies outside of Japanese-occupied areas. Since this added fabi notes in the market, the Chinese currency become more unstable and prone to inflation.

## 5. Policies and statistics in Communist-Occupied areas

Policies in Communist-occupied areas had three goals: to issue currency that protected the people's welfare and the economy of the anti-Japanese base; to issue a separate currency so the base would not be affected by

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counterfeit notes; and to appropriately handle the relationship between the local currency and the fabi. The rules that the Communists proposed were to limit the amount of local currency issued so that it would not exceed the amount needed in the local market. This would guarantee the local currency's credit and therefore the people's trust. As the Communists' priority was to protect national interests, they decided to support and protect the fabi as much as possible and allow its use in addition to the local currency. However, they did expect to eventually eliminate the fabi from the local market because the local currency was the most reliable currency at the time. It could not be used in the foreign exchange market and was not a dominant currency like the fabi, so the Japanese government would not bother with counterfeiting the small Communist issues.

In some Communist-occupied areas, inflation rates were not as high as those of Nationalist or Japanese-occupied regions. This was because the Communists countered inflation by setting up banks of their own and issuing their own notes, broadly called the kang-bi (meaning "anti-Japanese war notes"). It is said that over 600 different types of kang-bi existed during 1937 to 1945, as each anti-Japanese base established its own form of currency. Each base also operated separately and took slightly different measures, but the over-arching policies were similar. Unlike the Nationalists, the Communists immediately banned the use of Japanese-issued notes.

Table 2 lists two major Communist note-issuing banks. In the east-central city of Huainan, the Huainan Bank was established to print the huainan-bi. The exchange rate with the fabi was flexible, but would only change after at least half a year. A stamp was put on top of the huainan-bi to denote its fabi value. After May of 1944, the fabi depreciated at such a rapid pace that the huainan-bi could no longer continue readjusting to it. The xinkang-bi (meaning "new anti-Japanese war note") replaced the older versions of the huainan-bi and the exchange rate was adjusted from 1 huainan-bi = 5 fabi to 1 xinkang-bi = 50 fabi (Zhang 1991: 73).

In Hebei province, the Bank of Shansi, Chahar and Hopei was established in 1938 for a function similar to that of the Bank of Huainan. It provided for a much larger region – Shansi province, Chahar province and Hopei province. Since this area was the largest anti-Japanese base near Japanese-occupied parts of northern China, the bank's headquarters constantly moved from one city to another. Despite the change, inflation in the three provinces remained less severe than those in other cities (see Table 3).

In anti-Japanese bases in Hebei province, members of the Red Army worked with villagers to try to become self-sufficient and minimize the amount of resources they bought. They also tried to teach villagers how to differentiate between real fabi and Japanese-issued counterfeit fabi. To enable the use of the Communist-issued currency, the Red Army made sure that Japanese soldiers were either scared or unable to disrupt marketplaces. This ensured the safety of both the merchants and the villagers, so

confidence in the local currency slowly increased. Throughout the war, areas that experienced the least inflation were typically Communist-occupied areas.

**Table 3.** *Inflation in different parts of China*

Year	Average	Chongqing (Nationalist)	Chengdu (Nationalist)	Fuping (Hebei Province) (Communist)	Japanese-Occupied Northern Areas
1938	131	126	128	100	143
1939	220	220	225	272	232
1940	513	569	665	1092	506
1941	1,296	1576	1769	899	1099
1942	3900	4408	4559	1469	3453
1943	12541	13298	14720	9774	14362
1944	43197	43050	56965	34483	284302
1945	163160	156195	170379	54601	9740248

**Note:** Using Fuping in 1938 as the base, 100.

**Source:** Zhang (1986: 242), Dai (1995: 284).

## 6. Policies and atistics in Nationalist-Occupied areas

Compared to the Communists, the Nationalists had to deal with Japanese attacks on a much larger scale as they were still the dominant, ruling party at the time. The government needed funds to fight the war, and the continuous increase in government spending led to an increase in government budget deficit. From 1937 to 1945, military spending attributed to roughly 60-70% of annual total government spending. Government revenues were unable to keep up with government spending, and, by the end of the war, government deficit was as high as 1,106,696,000,000 fabi and government revenue was only roughly 20% of the total spending (Chang 1986: 80).

To account for this increasing deficit, the Nationalists printed more and more fabi (see Table 5). Each year, they printed at least twice as many as they had the previous year. As Japanese manipulation had already caused the depreciation of the fabi, the endless influx of fabi made matters worse.

In 1935, the Nationalist government had announced that fabi would be printed in only four national banks of China: the Bank of China, Bank of Communications, Central Bank of China and Farmers Bank. Despite inflation, the government was reluctant to issue notes with larger denominations. Thus, when the people wanted to make exchanges, they had to carry large parcels of smaller notes. This reluctance created inconvenience for the people as well as the government. As more ink, paper and banknotes were needed to print a larger amount of bank notes, the government had to pay no less than US\$55 million to account for the rising printing costs (Young 1965: 161).

Nominal bank deposits also grew. However, the increase of deposits reflected rapidly rising prices and increased credits instead of savings. Total deposits in commercial and provincial banks grew less than 10-fold during the war, but average prices increased about 2600-fold (Young 1965:164). Therefore, total deposits actually shrank greatly in real value. In

addition, the share of government banks in total deposits grew as the war continued on, mostly because the capital funds of private banks could not keep up with inflation.

**Table 4.** *Increase of Total Note Issue and Bank Deposits in Free China (millions fabi)*

Year end	Increase of note issue	Increase of bank deposits	Value of issue in terms of prewar notes
1938	674	847	1310
1939	2059	1905	1325
1940	3635	1777	1085
1941	7376	5979	765
1942	19509	9146	520
1943	40062	12784	330
1944	114082	69614	250
1945	842471	432553	415

**Note:** The base is January – June 1937 = 1.

**Source:** Young (1965:163, 304).

The Nationalists tried to sell gold to stabilize the value of the fabi and increase citizens' confidence in the fabi, but it did not work. The thought of selling gold already made villagers feel insecure, and when inflation persisted, villagers no longer believed in the value of the fabi. Furthermore, the Nationalists did not respond much to Japan's actions, and were view by the populace as having simply accepted the consequences. The government finally acted to ban the use of Japanese-issued notes, limit the amount of fabi that could be exchanged internationally, and print counterfeit notes to use in Japanese-occupied areas. It is hard to analyze the relevant statistics because it is believed that, by the time the Nationalists enforced these regulations, inflation was so out of hand that it was almost impossible to handle.

Another way the Nationalists dealt with the deficit was to raise tax revenue. The government created an estate tax, an inheritance tax, and a tax on excess profits, and increased the tax on firms and of stamp duties. Income taxes were imposed only on government officials, and, in April of 1942, a sales tax ranging from 5 – 25 percent was imposed, with more essential goods being taxed at lower rates. Most effective was the reform of the taxation on salt. In 1941, the salt tax was changed to an ad valorem basis and taxed according to its monetary value. Then, in 1943, an extra tax of 300 fabi per barrel was added. In 1944, tax revenue from salt made up over 60 percent of total tax revenue, a 20 percentage point increase from that in 1943 (Chang 1986: 89).

The Nationalist government was also the only government to issue foreign bonds, as the Communists were unable to do so and the Japanese only issued bonds in Japan. In preparation for war, it had issued 500 million fabi worth of bonds in both 1937 and 1938. From 1940-1941, it renamed the bonds to "bonds to support military goods" and "bonds for economic recovery," and issued 1.2 billion fabi worth of bonds each year. The bonds were renamed once again in 1942 to "bonds for victory," and, by 1945, over 9 billion fabi worth of bonds had been issued (Chang 1986: 97).

Although these bonds helped, American and British willingness to lend money to China was crucial to the Nationalists' war efforts. With the onset of the Pacific War, the United States and Great Britain began to see China as an ally. In 1942, the United States lent the Nationalist government 2 billion dollars and allowed it to sell bonds in U.S. dollars. Great Britain also agreed to lend 50 million pounds sterling (equal to 212 million dollars).

## **7. The gold and silver problem**

Although most countries around the world took their currencies off the gold or silver standards during the Great Depression, the inherent value of gold and silver was still recognized. It could be used to buy foreign currency, so if a country had gold or silver, it would have access to foreign currency and therefore more resources. As gold and silver were traditionally valuable in Chinese culture, Chinese families typically possessed them in some way. Thus, Japan targeted China's supply of gold and silver. First, its army raided gold and silver directly from villagers, banks, and local governments they occupied. Then, by using the power of their puppet governments and puppet banks, Japan enforced policies to obtain coins in Chinese currency, since they were made of gold and silver. In fact, the Central Reserve Bank of China even had a special "gold-and-silver-obtaining" department. In northern China, the Bank of Manchou bought over 32 million grams of gold by 1945, of which almost 30 million grams were used to exchange foreign currency and buy goods for the Japanese military. Furthermore, the price at which the Bank of Manchou bought gold was rather low: 2.47 fabi per gram until 1943, and 4.4 fabi per gram after 1943 (Dai 1995: 229).

In response, the Nationalist government tried to maintain and even increase its supply of gold and silver. It limited exports of gold and mandated that only the government could purchase gold. Therefore, citizens could only sell their gold and silver to the state. However, as the government itself was in financial difficulty, it did not have the ability to buy or mine additional gold, and gold began to be sold in the black market at a high price. The government was then forced to allow the free sale of gold again in 1943. In the same year, the government changed its policies so that it began to sell instead of buying gold to obtain more fabi to use. This shift was mainly due to the United States' 2 billion dollar loan to China. The respite that the U.S. loan permitted did not ultimately prevent hyperinflation.

## **8. Printed currency, exchange rates, and inflation**

As the war continued, all banks printed more of their currency. However, the amount of fabi printed by the end of the war far surpassed the amounts of other currencies. At the same time, the exchange rate of the fabi to Japanese-issued currencies fluctuated. Even though the exchange rates show that inflation was highest in areas using the fabi, inflation

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occurred throughout China. This suggests that, as the amount of currency and notes available in the Chinese economy as a whole increased, inflation rates rose throughout the country.

**Table 5.** Notes issued by Chinese and Japanese banks, 1935-1945 (in millions)

Period	Nationalist banks					Japanese banks				
	Central Bank of China	Bank of China	Bank of Communications	Far-mers Bank	Total, 4 government banks (fabi)	Central Bank of Manchukuo (yen)	Federal Reserve Bank (FRB\$)	Central Reserve Bank (CRB\$)	Military notes (military yen)	Meng-cheng Bank (yen)
1935.12	176	286	180	30	673					
1936.12	326	459	295	162	1,242					
1937.6	376	510	314	208	1,407					
1937.12	431	607	371	231	1,639	307			1.4	13
1938.6	490	653	322	262	1,727					
1938.12	768	712	548	277	2,305	426	162		36	36
1939.6	768	991	603	339	2,700					
1939.12	1,880	1,227	814	365	4,287	624	458		151	60
1940.6	2,894	1,650	1,008	511	6,063					
1940.12	3,852	1,947	1,329	739	7,867	947	715		248	63
1941.6	4,808	3,045	1,784	1,079	10,715					
1941.12	6,341	4,349	2,631	1,812	15,133	1,201	964	237	244	114
1942.6	8,468	6,848	4,204	5,425	24,945					
1942.12	34,360	0	0	0	34,360	1,670	1,581	3,477	381	143
1943.12	75,379	0	0	0	75,379	3,011	3,762	19,150	407	379
1944.12	189,461	0	0	0	189,461	5,877	15,841	139,699	671	2,499*
1945.12	1,031,932	0	0	0	1,031,932	8,158	83,506	2,697,231	1,516	

Note: After July 30, 1942, only the Central Bank of China issued notes. \*July 31, 1944.

Source: Young (1965: 364, 366), Hong (2005: 657).

The existence of the British and French concessions at Tientsin (Tianjin) largely restricted Japan's ability to gain full economic control over northern China, because the concessions contained the main trade and financial center of the region. Although the British accepted some of Japan's demands in December of 1938, such as the acceptance of the Federal Reserve Bank of China currency, they firmly refused to make it the legal tender of the concessions. This stalemate and the worsening of diplomatic relationships caused the foreign exchange rate of Federal Reserve Bank of China notes to match the trend of the fabi until December 1941, when Japanese forces occupied the international concessions of all Chinese cities under their control in parallel with the Japanese attacks on Pearl Harbor, the Philippines, Malaya, and Thailand (Young 1965: 172).

The Japanese also controlled credit expansion in northern China more strictly, so prices in Tianjin in terms of Federal Reserve Bank of China notes from 1941 were much lower than those in Free China. In 1945, the rate of increase of prices in Tianjin exceeded that in Free China as the tide of the war turned to favor the Nationalists and the Communists (Young 1965: 173).

**Table 6. Retail and Wholesale Prices in Occupied and in Free China**

Year	Wholesale prices in occupied China		Average of retail market prices in	Retail Market Prices in chief cities of Free China		
	Tientsin/Peiping <sup>a</sup>	Shanghai	Free China	Chungking	Chengdu	Hengyang
1937.6	1	1	1	1.01 <sup>b</sup>	0.97 <sup>c</sup>	1.05 <sup>d</sup>
1938 <sup>e</sup>	1.29	-	1.45	1.4	1.215	1.76
1939.6	1.77	1.64	2.26	1.91	1.55	2.73
1939.12	2.47	3.18	3.23	2.82	2.82	3.41
1940.6	3.7	4.51	4.87	5.33	5.22	4.26
1940.12	3.48	5.23	7.24	11.12	10.49	5.56
1941.6	3.61	8.03	10.5	14.97	15.02	8.7
1941.12	5.84 <sup>f</sup>	15.6	19.8	26.79	22.68	17.6
1942.6	7.22	29.4	35.9	48.3	36.2	37.9
1942.12	11.7	44.7	66.2	69.5	68.4	81.5
1943.6	18.6	104	132	105	127	129
1943.12	33.5	214	228	199	246	235
1944.6	81.6	560	466	422	543	357 <sup>g</sup>
1944.12	351	2490	755	651	764	-
1945.6	1455	21300	2167	1763	1704	-
1945.8	3791	85200	2647	4215 <sup>h</sup>	2509 <sup>i</sup>	-

**Notes:** <sup>a</sup> Tientsin: 1937.6 – 1941.6; Peiping (Beijing): 1941.12-1945.8. <sup>b, c, d</sup> July 1937. <sup>e</sup> Average for 1938. <sup>f</sup> January 1942. <sup>g</sup> April 1944. <sup>h, i</sup> December 1945.

**Source:** Young (1965: 152, 351).

Inflation itself is characterized by a high turn-over rate (velocity) of money, in which people are less willing to hold money because its purchasing power is falling quickly. They would much rather buy, and did buy, more and more goods. This was the case in Free China. The increase in the amount of notes issued caused prices to rise, hurt consumer confidence and increased the turn-over rate, causing prices to rise once again. Although the 1935 currency reform greatly strengthened the people's confidence in the fabi, the continued increase in the amount of fabi issued later gradually destroyed confidence.

**Table 7. Increase of prices and note issue in Free and Occupied China, 1937-1945**

Time	Free China			Occupied North China			Occupied Central and South China		
	Retail prices (avg) <sup>a</sup>	Fabi note issue <sup>b</sup>	Excess of price over note index (%)	Wholesale prices at Peiping <sup>c</sup>	FRB note issue	Excess of price over note index (%)	Wholesale prices at Shanghai	CRB note issue	Excess of price over note index (%)
1937.7	1.04	1.02	2						
1937.12	1.18	1.13	5						
1938.6	1.40	1.17	20						
1938.12	1.76	1.48	19						
1939.6	2.26	1.70	33						
1939.12	3.23	2.55	27	1.00	1.00	-			
1940.6	4.87	3.50	39						
1940.12	7.24	4.38	65	1.41	1.56	-9			
1941.6	10.51	6.10	74						
1941.12	15.95	8.46	88	2.36 <sup>d</sup>	2.11	12			
1942.6	35.9	13.8	160						
1942.12	66.2	18.9	250	4.73	3.45	37	1.00	1.00	-
1943.6	132	27.2	385						
1943.12	228	40.8	458	13.6	8.22	65	4.76	5.18	-8
1944.6	466	66.1	605						
1944.12	755	102	640	142	34.6	310	55.3	37.8	46
1945.6	2167	214	912						
1945.12	2491	556	349	1535	183	740	1895	902	110

**Notes:** <sup>a</sup> January - June 1937 retail prices = 1. <sup>b</sup> Fabi issued as of June 30 1937 = 1. <sup>c</sup> Figures for 1939 and 1940 are for Tientsin. No complete series is available for Tientsin or Peiping, but combining the two series appears to involve no substantial error. <sup>d</sup> January 1942. **Source:** Young (1965: 303).



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The velocity of money can be used to analyze Japanese-occupied areas of China as well. At first, the number of notes issued grew faster than the rise of prices, reducing velocity. During that period, confidence in fabi was widespread, showing that the Nationalist government's initial effort to print more bank notes was effective. As time passed and the people became aware that the amount of notes printed would only further increase, consumer confidence began to decrease.

From all the data above, it can be concluded that inflation and therefore prices were heavily tied to the amount of notes issued by the banks. The currencies that were created after the fabi (lianyin-quan, huaxing-quan, military yen and huainan-bi) were worth more compared to the fabi, but, as larger amounts of the currencies were continuously printed, all the currencies depreciated like the fabi did and prices rose in the corresponding areas.

### 9. Conclusion

The inflation of China from 1937-1945 led to a period of turmoil for the country and a shift of confidence in the government from the people. Even though Japan did not win the Second Sino-Japanese War, its plan to attack China both militarily and financially was successful in many ways. It strongly damaged the fabi, pressuring the Nationalist government to use more resources and capital to maintain the stability of the economy and the welfare of the citizens. The Japanese did harm to themselves, too, because their plan did not go as smoothly as they had hoped. The currencies they issued through puppet banks eventually followed a pattern of inflation similar to that of the fabi, and they had to think of ways to protect themselves while continuing to damage China's currency. When put in this perspective, the Communists seemed to have benefitted the most from this series of events. The inflation brought the legitimacy and competence of the Nationalist Party into question, and extinguished the strong support for the currency reform of 1935 and unyielding confidence in fabi within the first few years of the war. The Communists' policies during the inflation also proved to be somewhat effective, making those who lived in Communist-occupied areas at least as well-off as those in other parts of China. This boosted the party's image and credibility, and may even have laid the basis for their subsequent victory in 1949. Thus, it should not be an exaggeration to say that the data provided show that China's wartime inflation contributed to the rise of the party that proved it had the ability to successfully manage economic crises.

### Data Note

An accompanying spreadsheet workbook contains additional data and graphs.

## References

- Bányai, R. (1974). *Money and Banking in China and Southeast Asia during the Japanese Military Occupation 1937-1945*. Taipei: Tai Wan Enterprises Co., Ltd.
- Chen, L., & Dai, J. (2007). “统制经济与抗日战争= Tong zhi jing ji yu kang ri zhan zheng (Controlled Economy and Anti-Japanese War).” *Studies on Anti-Japanese War*, v. 2. (In Chinese.) [Retrieved from].
- Chang, K.-n. (1986). 中国通货膨胀史,1937-1949年= Zhong guo tong huo peng zhang shi, 1937-1949 nian (*History of Chinese Inflation, 1937-1949*). (In Chinese.) Beijing: Wen shi zi liao chu ban she.
- Dai, J. (1995). 金钱与战争：抗战时期的货币= Jin qian yu zhan zheng: kang zhan shi de huo bi (*Money and War: Currency during the Anti-Japanese War*). (In Chinese.) Guilin Shi: Guangxi shi fan da xue chu ban she.
- Hong, J. (2005). 中央银行史料, 1928.11 – 1949.5 (上卷) = Zhong yang yin hang shi liao, 1928.11 – 1949.5 (Shang juan) (*History of the Central Bank of China, 1928.11 – 1949.5* (Vol. 1)). (In Chinese.) Beijing.
- Nakamura, M., Naosuke, T., & Kobayashi, H. (1994). 戦時華中の物資と軍票 = Senji kachu no busshi doin to gunpyo (*Resource Mobilization and Gunpyo in China during the War*). (In Japanese.) Tokyo: Taga Shuppan.
- Shibata, Y. (1999). 占领地通貨金融政策の展開 = Senryochi tsuka kin'yu seisaku no tenkai (*Development of Currency and Monetary Policies in Japanese-occupied Territories*). (In Japanese.) Tokyo: Nihon Keizai Hyoronsha.
- Wang, C. (2006). “货币之战:论抗日根据地的金融稳定政策 = Huo bi zhi zhan: lun kang ri gen ju di de jin rong wen ding zheng ce (Currency War: A Discussion on Policies to Stabilize Finance in Communist-Occupied Areas).” *The History of the People's Republic of China*, v. 6. (In Chinese.) [Retrieved from].
- Wang, Y. (2006). “抗战时期日军对中国的货币战= Kang ri shi qi ri jun dui Zhong guo de huo bi zhan (Currency War Between China and Japanese Army during Anti-Japanese War).” *Journal of Liuzhou Teachers College*, 21(4). (In Chinese.)
- Young, A.N. (1965). *China's Wartime Finance and Inflation, 1937-1945*. Harvard East Asian Series 20. Cambridge: Harvard University Press.
- Young, A.N. (1971). *China's Nation-Building Effort, 1927-1937*. Stanford: Hoover Institution Publications.
- Zhang, S. (1991). 淮南抗日根据地货币史 = Huai nan kang Ri gen ju di huo bi shi (*The Financial History of the Huainan Anti-Japanese*). (In Chinese.) Hefei: Anhui ren min chu ban she.
- Zhang, G. (1986). *China's Inflation History: 1937-1949*. Beijing: Wen shi zi liao chu ban she.



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