
**ЭКОНОМИЧЕСКАЯ ТЕОРИЯ И ИСТОРИЯ / ECONOMIC THEORY
AND HISTORY**

Chinese monetary system during the renaissance: silver standard and globalization in Ming dynasty**Zhang Shouyi¹**

As the earliest issuer of paper money in the world, Chinese empires had a great monetary experiment lasting around 500 years which despite ended in failure. At the same time with Renaissance, a massive American silver flowed into China due to the Great Discovery. Hence, the silver finally completed the Chinese monetary systems and brought the final glory of ancient time to this old civilization. The silver standard became the Damocles Sword of the empire and exposed one of the biggest drawbacks in the agricultural social regime. We try to tease out this silver main line and understand the Needham Puzzle by the monetary dimension.

Keywords: *monetary system, silver standard, Chinese economic history, globalization.*

JEL codes: *E42, N15.*

Introduction

Joseph Needham, a British science historian and sinologist, posed a known question that why did modern science, the mathematization of hypotheses about nature, with all its implications for advanced technology, take its meteoric rise only in the West at the time of Galileo but had not developed in Chinese civilization or Indian civilization? (Needham, 1969) Therefrom a mystery was left for the subsequent researchers. Gunpowder, the magnetic compass, paper and printing, which Francis Bacon considered as the four most important inventions facilitating the West's transformation from the Dark Ages to the modern world, were invented in China. Why the industrial revolution did not originate in China? (Lin, 1995)

Since the twentieth century, many scholars tried to explain it in various aspects. One of the explanations is that the Chinese inventions totally rooted in the practices and experience accumulated by the artisans and peasants in premodern time, lack of systematical research made the technology factor absent (Lin, 1995). Zhu and Wu (2007) built a growth model with increasing return to scale to prove Lin's opinion that in an industrial society, the technological development has an exponential relation with the output rather than the linear relation of the population (labor). This relation seems to unclench the capacity of production resources and facilitated the productivity explosion and the industrial revolution.

If we review the history from the former perspective, the geographic discovery offered undoubtedly plenty of resources for Europe to enter this path. The age of discovery during Renaissance opened the prelude of globalization. Corresponding to the western Renaissance, China

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was under the reign of Ming Empire (1368–1644), the penultimate feudal dynasty in Chinese history. During this period, China and Europe experienced the formation of the citizen class and the prosperity of commerce, which have the key conditions for the sprout of capitalism. Then the great divergence said like Kenneth Pomeranz (2001) started from here. The European commenced their preparation to the industrialization, while the Chinese continued the experiment of paper money in circulation and attempted to climb another prosperous peak of the agricultural society.

The paper money ended in failure. However, the silver standard was established after the notes experiment. China appeared to dip a toe in the water firstly at the monetary standard system than the others. This time, it was not good news but the last straw to devastate the empire. The Ming dynasty is the epitome of Chinese feudal agricultural society lasting for two thousand years, and we reexamine it through the silver dimension to figure out the cause of failure.

1. Institutional Reconstruction and Paper Money

During the Song (which has two reign periods named Northern Song 960–1127, and Southern Song 1127–1279) and early Yuan (1271–1368, Mongol-led) dynasties, China's agricultural and industrial production, its domestic commerce, and its economic contacts with the "outside world" all expanded dramatically, reaching levels that far surpassed anything known in earlier periods of Chinese history. Especially on the paper money, it has been invented initially since Song, and Yuan not only created a pure paper currency circulation system, but also set a precedent for unlimited legal tender, which is almost a precursor to the legal currency of later countries.

In early Yuan, government has taken the lesson of previous issuers prohibiting the use of coins and setting a quota reserve, which maintained currency stability for many years. However, the later emperors abandoned this policy and issued notes massively to reply on the natural disasters, economic troubles, and social crisis. The Mongol reign was toppled down inevitably in the end.

Fatally, the money is only a medium of exchange and a store of value for the people than a ruling instrument. The subjects complained about the exploitation of the alien ethnic rulers and ignored the key of the institution. A new dynasty led by the Chinese ethnic replaced Yuan and a new historical cycle started its journey.

1.1 A Reset of Traditional Agricultural Economy Regime

For Ming Dynasty, people always have some contradictory acknowledges: one part regard it as a medieval regime, the other deem it had been a modern time at the end of its reign. Many scholars of California school demonstrated that, in the mid-late Ming, the economic prosperity of Jiangnan (the areas south of the Yangtze River) was comparable to that of European countries at that time. In these areas, the thriving of industry and commerce, the flourishing of trade, and the fine division of labor were enough to make people doubt that the sprout of capitalism had shot. Without the intrusion of Manchu, China would have chance to the path of industrialization.

This is undoubtedly a simplistic view. In fact, Ming Dynasty seems to undergo a time travel which gone through a development course from the medieval Hongwu (the reign title of the first emperor of Ming, 1368–1398) regime to a premodern commercialized economy in a short period. The Ming experienced thousands of years of Chinese history at one time, its lessons are an epitome of Chinese history.

The Ming replaced Yuan Dynasty and claimed to regain the legitimacy of the ethnic Han Chinese. The regime design inherited from Yuan, but also imitated the structure of Song. The historian Li Xinfeng considered that, in the early Ming, the imperial power was extremely expanded which originated from Song, Jinn (1115–1234, Jurchen-led) and Yuan traditions.

Emperor Hongwu returned to the conscription system, separated the military rights into training, commanding and deploying. He abandoned the mercenary system of Song, which was supported by a huge fiscal expenditure. Accordingly, he regressed the fiscal and taxation system to the physical economy, forced the policy of stressing agriculture and damping commerce by impairing the industrial-commercial prosperous of Jiangnan and implementing maritime embargo. On the management of society, the Song government deregulated the primary-level management progressively, and basically appointed the local elites as governors, which gave civilians considerable freedom. However, the Ming government regulated in a diametrically opposite way to establish some strict regimes like Lijia (administrative community system) and Huangce (household registration system). He distributed the corvée to households and divided them into soldier, civilian, artisan and salt-maker hereditary identities, every civilian must to do the statute labor. This Hongwu regime reigned the Ming from early to middle outputting a stable society and from an economic regression to the small-peasant economy. Comparing with Song, who has an advanced commodity economy and emitted 260 million guans (unit of coin, one guan contains one thousand coins) copper coin, the amount of Ming did not exceed 6 million guans, which is less than 3% of Song.

The Hongwu regime cannot function well forever as wish. Frequent north border hostilities demanded objectively resident border guards rather than his assumption to isolate commanders and soldiers, assembling in war and disbanding in peace, while this system had to be displaced stepwise by a combined system with permanent bolder army under the direction of Zong Bing (commander in chief) and enormous standing army around capital battalion. Tumu crisis in 1449 was the bursting point. After the complete collapse of army in Tumu Fortress, the Ming military system return to the mercenary system step by step to restore the combat effectiveness to some extent.

In the economy, the production capacity by the farm system in early Ming was curtailed severely, while the Lijia-household-farm system heavily relying on the primary-level management ability inevitably fell into decay. With a vast expenditure, the traditional corvée system was overwhelmed, tax-in-kind had exposed the drawbacks of inefficiencies and inadequate use, and tax in kind commuted into silver gradually become more and more common so was the corvée. (Twitchett, Mote, 1998). The population has proliferated in the period of peace, the agricultural form of Jiangnan has also been constantly changing, the previous maritime embargo was continuously broken, the commercial and handicraft industries continued to develop. In the middle of Ming, the Hongwu regime existed in name only, with the inflow of a large amount of overseas silver and the shock of politico-economic reform like Single Whip reform of Zhang Juzheng (*Shou Fu*, senior grand secretary of Wanli Emperor r.1573–1620) in 1570s.

The economic situation in the mid-late Ming was completely different from that in the early. The difference was so great that many historians talked about the changes in the middle of Ming, saying that it echoed the changes in the Tang and Song. This great change of trend also determines the transformation of the monetary system of the Ming, from the shackles of Great Ming Treasure Notes to the establishment of the silver standard.

1.2 Notes Issuing No Longer Work

The Ming Dynasty is the last scene of the notes issuing history in ancient China. One of the most important causes affecting the monetary system of Ming happened nearly twenty years before the empire was founded in 1368.

Mounting economic troubles, natural disasters, military uprisings, and outbreaks of epidemic disease occurred in many parts of China during the two decades. Therefore, the Yuan government announced a new currency reform in 1350 to issue a new type of paper money. Because of lacking sufficient reserves in the treasury, these new notes were neither convertible with precious metals, copper coins, or silks, nor backed as some earlier Yuan notes had been. It is not surprising that these new notes failed to hold their arbitrarily assigned value facing this fact. Having been virtually worthless by the mid-1350s encouraged the hoarding of both good quality copper coins and unminted precious metals. Hence, silver rose rapidly in value at this time.

Over the next few years, it is increasingly difficult for private sectors to obtain the credits in China, and the commercial activities slowed down. The Yuan fell in the late 1360s amidst a sharp monetary contraction in everything except poor quality copper coins and paper notes that no one wanted and very few people would use (Twitchett, Mote, 1998).

As far as currency is concerned, the model of the early Ming largely followed the Yuan. From the Southern (420–589) and Northern (386–581) Dynasties to the Sui (581–619) and Tang, from the Song to the Jin and Yuan, the evolution of the monetary system has a very strong consistency. Radical reform not only has great resistance in the private sectors, but also faces challenges in the upper level. The choice of monetary policy has strong externalities within the local network, and the descendants imitating the previous generation model are an understandable path dependence.

At the beginning of the establishment of Ming, it was hoped that the notes issuing would solve the problems. The still financially weak administration of founding Emperor Hongwu issued notes which did not be converted with coins, and he even prohibited the use of silver by the people. This practice is very similar to that of Yuan. On the surface of the Treasure Notes, there is the words “Great Ming Treasure Note, Universal in the World”. “A reward for accusing counterfeiter” is on the Notes. It is interesting that, the rewards of the counterfeiter accusation in Yuan and Ming were all in silver. The Treasure Notes are approved that “Note dominated one guan equals one thousand copper coins or one tael silver, four guans are equivalent to one tael quasi-gold”, it can be seen that the price of gold and silver in the early Ming was about 1:4.

In the Ming Dynasty, Great Ming Treasure Notes could not be exchanged for coins or any other metal currency. Such regulations have almost become the predecessor of the fiat money, but there is no sufficient reserve fund as a guarantee and the result is naturally conceivable. In the market, Notes were unpopular from the beginning, the people refused to use them, coins and silver were still popular, and the stubborn founding emperor still reaffirmed the silver ban until the end of his rule. It was until the Yingzong generation (1435–1464) that the silver ban began to relax, but it was still guilty for refusing to use the Notes, and even the possibility of all the family sentencing.

The Ming currency system was originally complete, with notes, copper coins, and silver ingots. However, in terms of actual use, in the Ming Dynasty, from “using notes without metal money” to “using both notes and metal money”, and then to “all paying with silver money”, the reason behind it is really too much depreciation of Notes making silver and copper regained the favor of the people. *Du Yu Shi* (Chief Censor) Chen Ying at that time also said that “the

implementation of Notes suffocated in recent years as a result of too many notes issued, and the court cannot recoup them easily so that the real value of Notes declines and goods price raise”. (Zhang, 1735) *Hu Bu* (the Ministry of revenue) also said that “private transactions, only use the gold and silver, the notes are stagnation”, the result is “the prices are too appreciated to circulate notes”. During the Hongwu period, the Notes had already depreciated sharply, that is, the official price of one guan Note was consistently equal to 1,000 wens (unit of one copper coin), but in fact the market price was to 160 wens. In the Chenghua period (1465–1487), taxes, bureaucrat emoluments, soldier’s pay and provisions are used Notes and metal coins together, the result is that one guan Note are less than one wen. In the fourth year of Jiajing (1525), even the official acknowledged the reality that the Notes depreciated sharply and turned down the price of Note-silver into one guan Note as same as 0.003 tael silver, the result was that the circulation of Notes became more and more difficult, but silver circulated on a large scale.

What is the impact of notes depreciation on Ming? In view of the inflationary consequences of the previous dynasties, the Ming abolished the notes in time. Unlike other dynasties such as Southern Song, Jinn, and Yuan, their issue of notes was stopped because of the demise. In Ming, notes were gradually stopped almost at the time when the wane was not revealed. The reason can be analyzed from the perspective of public policy. The incentives and interests of all parties concerned should be taken into consideration, and all major policies, whether progressing or retrogressing, cannot be separated from the collective incentives or tolerances of the bureaucrats. To put it bluntly, if it is not good, everyone will not do it.

In the case of Ming, notes were devalued so that the government could only rely on administrative power to force everyone to use it, but administrative power did not last normally for a long time, because the bureaucratic group represented by administrative forces would resist such behavior firstly. The interests of officials are also affected by the depreciation of notes, and the system of promoting notes is naturally difficult to maintain. Whether this behavior is positive resistance or negative execution, it will lead to administrative measures that are difficult to implement. In the end, the emperor will find that this is a war for himself, the ban is only on paper, and the final result is end up with nothing definite.

The notes were issued when the economy was prosperous, the issuing continued so as the ongoing economic prosperity even when the notes depreciated, and then the economic crash caused the withdrawing of notes and the demise of dynasty. It almost is the Chinese cycle of notes issuing.

2. Economic Development and Establishment of Silver Standard

Despite the monetary policy has failed in the key element, the Ming government still continued issuing massive notes, some of them used as the gifts to royal relatives and nobilities, as presents to the elchees of dependent countries, and as the grants and emoluments to the bureaucrats. However, considering the notes kept devaluating in the early Ming and had no monetary value wherever outside China, the notes holders spent the paper money as quickly as possible, which led to the vicious cycle of depreciation.

The early Ming government were unsuccessful in taking measures to force the circulation of notes and to halt the value decline. Therefore, the notes did not play a dominant role in the daily life of most people, although the notes issued by court continued to circulate finitely for much of the reign time. At the latest of the early fifteenth century, the folks traded dominantly with unminted

silver by weight or with copper coins by quantity, metal currency form was stabilized and the Chinese empire entered a new monetary age.

2.1 Silver and Silver Importation throughout Globalization

People often attributed the establishment of the silver standard to the Ming Dynasty, but the official attitude to the silver was extraordinarily contradictory experiencing the initial resistance to the final acceptance. They just started to follow the Yuan practice and tried to replace copper coins and silver with notes. In the design of Great Ming Treasure Note, the basic attitude is that folk gold and silver can only be sold to the government.

The silver prohibition was to promote notes without the competition of silver. Conversely, the decline and withdrawal of notes stems from the establishment of silver's victory and status. The exit of Ming notes has a tipping point, that is, in the early 1490s. In the twenty-sixth year of the Hongwu (1393), the circulation of copper coins was temporarily banned, but by 1400, the notes had fallen to 3% of their face value, even though the imperial officials themselves complained.

The Chinese has a saying “under the heaven, it is the kingdom of emperor”, however, historical development is not the only one insusceptible with the will of the emperor, and so is the currency. The silver ban in the early Ming has not been strictly observed, especially all excessive notes issuing are inevitably facing devaluation problems. After Yingzong enthroned in 1436, he had to “freeze the ban on silver.” *Ming Shi* (history of the Ming Dynasty) stated that “the court and the populace are both using silver, and the penny ante is using coins, only the bureaucrat emolument is using the Notes as one part” (Zhang, 1735). Since then, there have been repeated iteratively. Until the first year of Longqing (1567), he announced that “all transaction with a value surpassing Decimus tael of silver, both the silver and the copper are allowed to use; under one-tenth tael, only the copper approved”. Since then, silver has officially gained its due status, fully monetized, and became a full currency. In fact, the emolument gradually became silver later, and the Ming Dynasty finally entered the silver standard system.

Under the politics skin of history, taxation is always the main artery of historical change, and currency is the capillary. The banned silver in Ming was still used. The first reason was that silver proved its applicability. The empire cannot maintain itself without taxation, and reforms such as Single Whip make the levy more efficient. Single Whip reform was promoted to the whole country by Zhang Juzheng in the ninth year of Wanli (1581). As for the influence of Single Whip on silver, the academic has long noticed that, for example, the economist pointed out in 1936 that it was not only a hub in the history of land tax, but also the beginning of the modern land tax system. Since then, the payment of land tax has been based on silver, breaking the physical levy in 3000 years. Wei Yuan, a thinker of Qing (1644–1912), believed that before the Song and Ming, silver was not a currency. The taxation changed from the copper coins and grains to silver leads to the general popularity of silver.

The silver standard at first glance is directly related to the Single Whip, and in fact has a secret connection with the inflow of silver. The implementation of Single Whip means that the previous corvée and other miscellaneous duties were commuted into silver payments. It is worth to pointing that this policy was first implemented from the southeastern coastal provinces because those were a place of silver infiltration. “Here the silver is ample, and commercial affairs have long been willing to use silver because of large-scale trade and commerce.” As this policy was extended to the whole country, the silver standard was gradually established.

The economic lifeline of the imperial regime lies in money, and the defeat always begins with finance and ends with finance. Whether the capital move to Beijing by Emperor Yongle (1403–1424) or the later voyages of Zheng He, such a politically event meant economic support, and these changes gave silver chances in the official system. Taking capital move as an example, the bureaucrat emoluments in early Ming was originally pieces of official field in Jiangnan, and soon changed to salary grains. After the middle of imperial reign, it was partially changed to Note (Zhao, 1796). The capital move of Yongle led to the inconvenience of the emolument claiming for the capital officers, which was not only getting salary grains by salary certificate, but also with some discounts. During the Xuande period (1426–1435), the *Jin Hua Yin* (gold floral silver) method was promoted in Jiangnan. The so-called *Jin Hua Yin* means the silver discounted from salary grains. Till the first year of Zhengtong (1436), it was the promotion of the *Jin Hua Yin*, and silver began to become the core of taxation. More than 100 years later, the land taxes become completely silver after the reform of Zhang Juzheng.

At the beginning of the fifteenth century, the Ming government finally gave up the Great Ming Treasure Notes, recognized the status of silver, and levied in silver. Silver finally became the protagonist, and there was a large inflow of silver from Japan and the Americas. Silver mine was also exploited during the Wanli (1573–1620) Period. The trend of “silver smelting fever” during this period of Ming was synchronized with the world, as was the case in Japan and Germany.

In addition to the ban on silver, the Ming Dynasty also secluded the country, and even banned the reclamation of coastal land; Emperor Hongwu once ordered that “the inch plank is not allowed to go to the sea”. Silver cannot be banned, so is the maritime embargo. In the fifteenth century, Zheng He was acquainted with the seven voyages in history. The folks were more swaying in the wind, smuggling was rife and the private undercurrents of foreign exchange and trade had always existed. Chinese trade relations with Europe and the Americas were also established in the sixteenth century and have continued for a hundred years.

It is worth mentioning that Zheng He’s voyages are not only well known to the Chinese, but also for overseas. China and Europe simultaneously turned their eyes to the ocean in the fifteenth century, but they have completely different motivations. At that time, China's ships and navigation technology were almost leading the world. Zheng's exploration was nearly a century earlier than that of Europe, but all his efforts were almost gone in the great changes of history. In *World Order*, the diplomat H. Kissinger also emphasized that Zheng He originally had a leading edge. In contrast to diversified or broken Europe, China's navigation technology is more advanced, but Zheng He's voyages are more focused on India and South Asia. He tried to attract local dignitaries into the Chinese tributary system with giving gifts, and brought back merely some local treasures.

Zheng He’s defeat is not technology, nor capital. There is evidence to prove that, regardless of size or tonnage, Zheng He’s fleet is 10 times larger than the Columbus’, but one is to show off the national prestige, the other is to explore the unknown, and there was no continuous mechanism after Zheng He to guarantee the voyage, which ultimately led to different results. Sinologist J. K. Fairbank (1957) emphasized the huge difference between Zheng He and Columbus in terms of driving force and motivation. The Chinese fleet not only lacks the impetus to bypass Africa to Europe, but also has no incentive to establish a trade base.

Hence, the ban of Hongwu is almost only on paper, whether it is for silver or for sea. There is actually a logical relationship between the two: the status of silver was consolidated in Ming, and thus became the value standard of the Ming and Qing Dynasties. It was inseparable from the massive inflow of overseas silver, and foreign trade contributed to this trend. The economist Quan

Hansheng (1967) has a lot of research on silver of ancient times, and his research has also been recognized by international counterparts. He put silver in Chinese history to compare. From the end of Tang to the middle of Northern Song, it is the highest tide of coins using, and in the middle of Ming, silver is gradually recognized, especially from the government revenue shown that the proportion changes of silver and coins. The conclusion is that from Song to Ming, the coins in the government income is less and less, the number of silver is increasing, to confirm the trend of “using silver and neglect coins” (Shown as Table 1).

Table 1.

The Number of Silver and Coins in the Government Income of Song and Ming

Time	Coins number	Silver number	Proof
5th year of Tianxi (1021)	26,530,000 (+)	883,900 (+)	LI Dao, <i>Xu Zi Zhi Tong Jian Chang Bian</i> , vol. 97
1st year of Yuanyou (1086)	48,4800,000	57,000	SU Zhen, <i>Luan Cheng Hou Ji</i> , vol. 15
8th year of Wanli (1580)	21,765.4	2,845,483.4	SUN Chengze, <i>Chun Ming Meng Yu Lu</i> , vol.35
9th year of Wanli (1581)	21,765.4	3,704,281.6	CHEN Renxi, <i>Huang Ming Shi Fa Lu</i> , vol.36

Source: Quan Hansheng, 1967.

China is lack of silver, and has not much silver mined, where did the silver currency of Ming come from? A well-recognized decisive reason is the silver inflow since the sixteenth century. As Wei Yuan (1794–1857) said, “... do not know since when, most of the silver in China come from overseas. The silver coins used in foreign countries are also ahead of China. Why? Before Song and Ming, silver did not for the currency”.

The self-produced silver in China is concentrated in Yunnan, and the *Tian Gong Kai Wu* of Song Dynasty recorded: “the silver in China was produced in ... however the output of eight provinces is less than the half of Yunnan”. For this reason, some Japanese scholars believe that the silver after Tianshun (1457–1464) of Ming was mainly produced from Yunnan, after Longqing (1567–1572) and Wanli (1573–1620), mostly from overseas, especially Luzon (Philippine island) (Kato, 2006). In addition to the silver produced in Ming, in fact, the amount of silver produced in the previous dynasties, especially in Song, was not small, far more than the Ming. Scholar Song Lingling estimates that the amount of gold and silver flowing into the national treasury during the Southern Song (1127–1279) was as high as 3 million taels. Song estimated that the total amount of silver in the late Song was about 100–150 million taels. However, these silvers did not all remain in China. The Yuan Dynasty used notes, and it was strictly forbidden to use silver. The western countries of China used silver traditionally, and their prices were much higher than those of China. Therefore, Chinese silver flowed through the Silk Road to the western countries in Yuan. According to the estimation of Japanese scholar Atago Matsuo, in China, the loss of silver in Yuan was as high as 90 million taels. If so, the silver number of the late Song that survived in Ming was only 30 million taels. Even so, this amount is higher than the own silver production of Ming, the latter is estimated to be 15 million to 25 million taels. Taken together, the local silver in Ming was about 50 million taels.

In contrast, silver from Japan, South America and Europe played a more important role in the silver tide of the Ming Dynasty. The tentacles of globalization have always colluded with trade. First of all, after several efforts by the Portuguese, they finally obtained permission for Macao trade.

The existence of Macao has always been one of the important gateways connecting the world to the Ming and Qing Dynasties. It links China with the world under the acceleration of globalization gears. The lubricating agent is naturally silver, and it is the silver that continues to flow into China. This trade model has even been summed up by some scholars as another kind of “tribute”: “Foreigners, including Europeans, have to pay silver to the Chinese in order to do business with them, which is indeed a ‘tribute’ in commerce”. However, the extent to which China relies on silver is actually much heavier than the Western dependence on Chinese silk and tea, especially when silver monetized progressively becoming an important economic blood of China. Regardless of Europeans or Chinese at the time, they have not paid enough attention to this major historical truth, leading to a series of tragedies of China began from the late Ming Dynasty.

More important is the trade with the Philippines, where the Spanish has to be talked about. Of course, this is not due to their contribution to trade. After “the discoverer of the Eastern world” the Portuguese exchanged with China, Macao became a trading base of various countries for hundreds of years. Since then, the “world's discoverer” Spanish has also come to the East. It is said that the vaccination was introduced to China in the early nineteenth century by the Spanish. Behind the prosperity of the trade with Philippines, it is the rise of Chinese merchants. Most of these merchants are from Fujian Province, especially the city like Xiamen, Quanzhou and Fuzhou. According to the records, the Spanish was uneasy about this rise and had to rely on the Chinese in trade. They had slaughtered Chinese businessmen in 1603 and 1639, and the victims were tens of thousands. However, the limitation on the number of people, the poll tax, and the expulsion could not stop the sustained growing of Chinese businessmen.

After the Spain occupied the South American continent, they obtained huge amounts of silver deposits. Since the sixteenth century, silver from South America has flowed from different channels to the world. The Philippines has become an important transit point for silver to flow into China, not only bringing together silver from Spanish Latin America, but also including silver that turns from Europe to South Asia.

Quan Hansheng estimated that the silver imported into China from the Philippines during Ming was 75 million pesos, about 60 million taels. In 1571–1821, it was estimated that “the silver that was brought to Manila from Latin America totaled 400 million pesos. These silvers were mainly used to buy Chinese raw silk and silk fabrics, and then shipped to Latin America for sale, so most of the silver went to China.” In addition, according to the calculation of Chinese scholar Qian Jiang, the actual trade volume between China and Luzon reached 300 million pesos from 1570 to 1760. Even the Spanish complained in 1639 that “the Chinese emperor was able to build a palace with silver from Peru. These silver shipments were not registered, nor did they pay taxes to the King of Spain”. Many scholars believe that the silver flowing into China from the Philippines is no less than 200 million pesos, which is equivalent to 7,200 tons.

In addition to the Philippines, a lot of silver has moved to Europe and then continues to flow into Asia. Ward Barrett believes that the world's silver production was 23,000 tons from 1493 to 1600, and the Americas production accounted for 74%, 70% entered Europe, and 40% of them went to Asia. Scholar Wan Ming (2005) estimated that a total of 12,620 tons of American silver flowed into China from 1570 to 1644. Frank's (1998) estimate is exaggerated, he believes that Europe received 98,000 tons of silver from the Americas in 1500–1800, of which 39,000 tons were shipped to China and 59,000 tons were left in Europe. Overall, in addition to Japanese silver, the consensus is that 1/3-1/2 of American silver has flowed into China, and various estimates are generally within

this range. According to concerned studies, a total of about 200 million taels silver flows into China, which greatly contributed to the silvering of Chinese economy.

In other words, although China first invented the paper money, *Jiao Zi*, but then the notes were spammed and returned to the commodity currency. In the chaotic situation, there was even a lot of physical exchanges such as copper and rice. Eventually, the metal currency was recognized by the market. In 1000 years, the first 500 years were the trial and crash of notes, the last 500 years were the confirmation and victory of silver. Silver began to play a major role in the Chinese economy. It was until the 1930s that China finally abandoned the silver standard. The influence of the silver flowing on China and the world is so far-reaching that the opponents of Western Centralism verify China's status from the inflow of silver in China to promote that “the wheels of the global market are lubricated with the global flow of silver”.

2.2 Silver Monetization and Society Commercialization

The use of silver is not only the result of the lush overseas trade, but also the need to shift from a physical economy to a monetary economy. It is derived from the maturity of the social and economic development of the Ming Dynasty. This also makes the economy of Ming Dynasty looking different from the past.

The special monetary system of Ming as well as the inadequate silver production formed an intense domestic demand for foreign silver during the late Ming period. In the beginning of seventeenth century, the domestic value of silver remained a very high level relative to the world standards. Hence, Chinese merchants were delighted to trade with foreigners who were willing to buy Chinese goods with silver. The over evaluated silver in China made a favorable margin for international speculations. The Spanish merchants who did business initially in Manila during the early 1570s found that the goods made in china had a better quality and was cheaper than that of Europe. It can explain why the foreigners had a great interest in Chinese goods at this time.

Silver not only stimulated the Chinese economy, but also spawned many social changes. The silver inflow was of great significance for the late Ming. It was at that time that a new secularized society due to commerce was formed apace, “by promoting monetary growth, improving the efficiency of commodity exchange, and prompting Chinese officials to implement long-delayed tax reforms, etc., the Japanese and Mexican silver dollar played a pivotal role in the dynamic economic expansion that made the prestige of late Ming Dynasty. The impact of this economic expansion was applied to various regions of Ming, but the impact on the south and southeast regions was particularly evident. As a result, the urban population has proliferated, agriculture has become more commoditized, and business and industry have prospered” (Atwell, 1986).

It can be seen that the monetization caused by the inflow of silver has led to changes in the quality of life, and the conspicuous consumption has increased. At this point, the Ming, the late Qing and the eighteenth-century Europe are very close, but it only brought great social changes in Europe. As Hume said, the inflow of bullion has created a high level of motivation in production and diligence in European countries.

In fact, the notion that conspicuous consumption is good for the economy can be verified today, and the American Economist Veblen's *The Theory of Leisure Class* has long proposed similar views. However, it seems that it is still rare for Sombart to define the extravagance and arrogance as the trend of the times and even the driving force of the times, putting it in a position like the “first impetus”. He believes that it is this kind of consumption which exceeds the necessity

that causes the sprout of capitalism, and the big cities in the early of capitalism times are basically consumer cities.

In the theoretical world of Sombart, the liberation of flesh and love is one of the driving forces of luxury consumption. Obviously, this is parallel to the world in *Jin Ping Mei* (A novel in Ming and describing the luxury life of a businessman). The two seem to be on the same starting point, while *Jin Ping Mei* is one or two hundred years earlier than the record of Sombart. The late Ming Dynasty was indeed an era of enjoyment and business. The seemingly identical luxury, why did not evolve the modern banking system and more financial innovation, and then capitalism?

3. Institutional Collapse and Destruction of Empire

The Chinese products combined with high quality and low cost made a significant impact on the industry of Spanish America, but brought back various of silver to sustain the social changes. The agricultural specialization and social commercialization were facilitated sharply during the Ming Dynasty. Handicraft industry such as silk, cotton, and porcelain grew rapidly and the products interregional trade expanded significantly. The Single Whip commuted the taxations into payment in silver only. The changes had brought certain benefits in promoting the economic development of empire, while creating some problems.

The importation of bullion cannot solve thoroughly the domestic chronic shortage of precious metals. Furthermore, it exposed a fatal institutional flaw. The imports accelerated a very rapid urbanization in China during the late sixteenth and early seventeenth centuries which indulged the commercial speculation to cause a significant inflation in certain areas. The consequent economic instability was amplified because of the excessive reliance on monetary expansion by the Chinese merchants and producers during this period. However, due to the depression of mining industry in China and the problems always plaguing the copper coins production, the money economy itself relied to a large extent on the bullion imports in increasing the money supply to maintain the economic stability and market confidence.

During the Tianqi (1621–1627) and Chongzhen period, there were a series political and economic environment changes in various areas of the world which led to a significant impact on the economy of Ming. Especially the monetary system of Ming faced several crises due to the repeated disruption of silver importation during the first half of seventeenth century and the sharp drop of silver output in the New World. This fatal flaw became a vicious cycle and expedited the demise of Ming.

3.1 Needham Puzzle in the Ming Dynasty

At the end of the Ming Dynasty in China, the economy was highly commercialized, and global silver continued to flow in. Why did it fail to produce capitalism? This is a question of history, but it is full of temptations for the various researches of futurities.

One of the most famous questions was posed by the famous sociologist Max Weber, who once asked: Why did the industrial revolution not first occur in China, where the sprout of capitalism was born? This is the famous Weber question. Later, when Joseph Needham studied Chinese science and technology inventions, he also developed the famous Needham puzzle. From Weber's question to Needham Puzzle, what is the possible answer? Joseph Needham's interest in China may have stemmed from the curiosity of his professionalism, but what he left to China was

decades of confusion. This huge theoretical black hole requires countless explanations to fill, while silver is an invisible dimension of historical axes.

The inflow of silver has triggered a series of economic changes: with the establishment of the silver standard, banks emerged in Europe, while there was *Qian Zhuang* (money house) in China – there are many silver shops in the novels of Ming Dynasty. The bank in Venice originated from the exchange business. The bank with the appearance of the central bank first appeared in Venice in the thirteenth year of Wanli (1585), and the *Banco della Piazza di Rialto* was opened in Venice in the fifteenth year of Wanli (1587). The famous Bank of Amsterdam was founded in the thirty-seventh year of Wanli (1609).

The silver gradually became the mainstream in the Ming Dynasty. It rewrote the Ming society from the monetary and commercial levels, and also penetrated into the folks, making all classes progressively involved in more secular and market-oriented life. The popularity of silver firstly brought innovations in the financial industry. It is well known that China has a long history of the exchange business. In the Tang Dynasty, there was gold and silver shops, whose business mainly was transaction, and the exchange was supplemented, there is no difference with the European banker who originated from the goldsmith. Early money shops are often seen as the predecessor of the *Qian Zhuang*, and also as *Qian Si* (money fair). Chinese *Qian Zhuang* and the banks in the world seem to be built in parallel with each other, but they have different starting points from the beginning and are destined to have different fates in the future.

It can be seen that the silver inflow seems to flow into a historical black hole of the Chinese customary regime, where there is only a partial change, but no institutional leap. If there is no institutional environment, especially the rules of law and the support of the contract spirit, capitalism will not be able to talk about it. The definitions of capitalism may be different, but most studies support the role of capital in market development and institutional shaping, whose an important part is precisely the support of the national government. “Environment, ambition, and even the concept of responsibility, bring the monarchs of many old regimes into the activities of capitalism.” Economic historians believe that there are two types of entrepreneurs, using political power and using their own organizational mobilization capabilities. The latter type of entrepreneurs gradually integrates with the former in the new era, and can benefit from the former or government by promulgating the laws in favor of its own business activities.

In contrast, the Chinese institution does not encourage entrepreneurs or entrepreneurial actions. The human business has a long history, and so is China. The *Chun Qiu Gu Liang Zhuan* said: “the ancients consisted with four kinds of people, there were scholars, merchants, farmers, and artisans.” It can be seen that merchants existed at the time and they were on the front burner than the farmers and artisans, but the subsequent order developed into scholars, farmers, artisans, and merchants. These four kinds of people were professional classifications, scholars and merchants are undoubtedly the two most active classes at that time, and the subsequent order is revised because of stressing agriculture and damping commerce. It can be seen that since the ancient times, China's industry and commerce have been relatively developed, and the status of merchants cannot be said to be low (the prohibition of merchants in wearing silk and using carriage is only an appearance), but Chinese historical traditions have inconsistent with or even contrary to business logic. Qian Mu once said: “China's historical traditions can often be vigilant in grasping the native economic view that life is the mainstay and then is economy. Hence, talking about economic issues, it is often focused on the “prudent budget and strict expenditure”. The budget and expenditure have a specific level, and the prudent and strict aim to guard against the excessive.” Therefore, the Chinese

government's ideal level of the economy is mainly “balance”, and its final standard is “the world is balance (peaceful)”, while the Western history is mainly seeking unevenness.

After all, entrepreneurs are the key people in society, and they are born in the “unevenness”. Chinese and Western entrepreneurs face different institutional environments, one is to inhibit commerce and industry, and the other is to protect the property rights. In the old days of China, although there was a lot possibilities of individuals getting rich or even millionaire, it was difficult to breed institutional changes with collective driving. For this reason, whether the Weber's so-called “puritanism ethics” emphasizing the diligence and abstinence, or the Sombart's so-called “capitalism spirit” combining the entrepreneurial spirit and citizen spirit, these similar spirits may have sporadic fires in China, but they always are difficult to make achievement and to escape the politic and commerce cycle of “red hat businessmen” (red hat is the symbol of officer). Only entrepreneurs who rely on institutional profits can be born, and entrepreneurs who promote institutional changes cannot.

Since the Renaissance, the trend of Western history began to turn, and the role of non-material institutional innovation began to expand. Peng Xinwei (1958) believes that European banks have developed deposits and exchanges from transaction businesses, which has led to a larger scale. After all, the financial industry is built on credit, and the accumulation of credit will stimulate positive currency creation. This road was not smooth sailing. In Venice the transaction shop also welshed on some deals, Charles I played ideas with the London Mint in the thirteenth year of Chongzhen (1640), and John Law launched a banknote game in France that were always a “negative” plunder. But after the setback, the Western modern banking system was finally formed. In contrast, China has evolved from a transaction to a lending business, but the deposit business has not progressed. The public and private have no habit of depositing out of themselves. Even the greedy in Ming, such as Yan Shifan, are only hoarding silver in his cave, and the rulers have always been “actively” plundering.

As for the exchange, in fact, China was one step ahead, even since the Northern Song Dynasty it has been normalized, but the descendants have evaluated it as “no one pays attention”, and the *Piao Hao* or *Qian Zhuang* raised in the late Ming. The exchange in Ming was operated by the government. The folks called it the ticket, which is the so-called *Qian Yin* (money quote) in the Song Dynasty. This traditional exchange method not only did not evolve with the commercial society, but also was colluded customarily between officials and businessmen. Europe started from a similar practice, developed more credit business, and then operated in international trade. Finally, in the seventeenth century, financial innovations such as checking accounts, deposit reserves, and promissory notes were developed, which triggered major changes in the business community.

China's *Qian Zhuang* was ahead of the starting point, but it eventually lagged behind and even annihilated in the history. What factors have led to the strange results of the private banking industry in China and the West? Furthermore, silver has driven the rise of new businessmen, but their rise is often to join the old class or to regard the official as the affiliation. Such entrepreneurs seem to have contributed to the society and economic market development in distributing the cake, not in making a bigger cake.

Regarding the characteristics of the Chinese economy, Qian Mu gave an explanation of humanity without losing his warmth. “China's industry and commerce have been prosperous under the precondition of development. However, when the social and economic conditions are sufficient to meet the needs of the people, the Chinese can often be on alert against themselves, stopping at this limit, and hoping to change the direction to put human and material resources on a higher sense

of life.... Therefore, the upward development of the economy is uniformly to a material aspect, while the West is biased towards scientific machinery, China is partial in the cultivation of art. ... It can be seen that the traditional Chinese economic concept is a kind of morality and human oriented, which emphasizes life and not the economy. The economy only supports life and does not control life. Therefore, economic development has become limited". Qian Mu believes that the abstinent development of industry and commerce is a kind of self-consciousness. This kind of explanation is a matter of opinion. However, regardless of Qian's own point of view or the moral thought he pointed out, it does reveal the China's economic policy view. In this kind of thinking, on the one hand, the economy tends to be satisfied at a low level of equilibrium, on the other hand, most businessmen have no status and they also have no motivations or rights to join the institutional game with government. The result is that the property rights system and the capitalism cannot grow.

Further examination, China has had borrow and lend money since ancient times. Among them, the government and folks have "on credit" and "on loan" differently in ancient times. In the Tang Dynasty, there was a so-called *Fei Qian* (flying money) transaction business. After that, the *Yin Pu* (silver shop) and *Qian Zhuang* prospered, showing the popularity of silver and the development of business. But this is not necessarily the sprout or sign of Chinese capitalism, there are sometimes too wishful in the commercialization of Ming. Many scholars have argued that commercialization is not equal to capitalism. Modern Western capitalism is different from the early commercial systems of China, India, Babylon, Egypt and the Mediterranean. The former relies on precise natural sciences, but China lacked similar laboratories even in the Qing Dynasty later. This kind of statement corresponds to the management level, and it is similar to Ray Huang's idea of "mathematical management".

This is only one aspect of the reason. In fact, in addition to cultural and national interpretations, the economic system is still a question worth considering. The different attitudes of the East and the West to trade, navigation, etc. have made their respective economies on different tracks, and the system of property rights protection is still the main point. This must depend on the protection of law. As North (et al., 1994) said, "if the expected net income exceeds the expected cost, an institutional arrangement will be innovated. Only when this condition is met, we can find out in a society an attempt to change the existing system and property rights structure".

In contrast to Europe, the gold and silver inflow from the Americas is seen as the rise sign of the Western world. These precious metals first created a group of upstarts. In fact, it is said that the cost of finding precious metals is almost equal to its value. This is more a process to redistribute wealth than re-create wealth, but in this process, the ownership of wealth changed, and the new class was born in Europe. The difference between these upstarts and the previous nobility is that the birth of their wealth has nothing to do with power, so more middle classes are born, and the middle class finds opportunities in new economic activities such as overseas trade, thus shaping new types of entrepreneurs. The accumulation of its power eventually became a major driving force for changing history, and capitalism was also nurtured among them.

When the world is changing, the efforts of Chinese merchants, despite are splendid by the use of silver, are still trickling in their own city and unable to break through the historical constraints to converge into a torrent of capital. Without the rule of law and credit, there is no space or historical environment for the growth of entrepreneurs. The birth of modern capitalism cannot be discussed.

3.2 The Inflow of Silver and the Demise of Ming

The popularity of silver in the Ming Dynasty was firstly the monetization demand of the economy itself. In terms of external supply, it also relied on the inflow of overseas silver. This is the karma of China's overseas trade and geographical discovery. Silver flourished on the occasion of the Ming Empire, and unintentionally, it also buried the seeds of destruction.

Tracing back to the demise of Ming in 1644, it should return to earlier. The Ming Dynasty was one of the nodes of China's old and new worlds. On the one hand, the Ming continued the evolutionary logic of previous dynasties, and on the other hand, it laid the foundation for the turning of the Ming and Qing. On the time axis, the Ming Empire corresponds to the revolutionary changes in Europe. For the comparative inertia, historians always like to start from the Ming Dynasty to analyze the millennium gains and losses. Some special years are marked, giving deep meaning, such as the 1587 of Ray Huang, another example was the 1600 of the sinologist Valerie Hansen.

1600 is a watershed for China. Hansen (2000), who has been fascinated by China for a lifetime, has a different perspective than our usual thinking. She pointed out that before 1600, China was actually an "open empire". She gave up the customary division of dynasties and defined China before 1600 as three periods: first, from the Shang and Zhou to the first stage of Qin, which was the period of China from 1200 BC to 200 BC; In the third century BC, after the unification of the Qin Dynasty, local Taoism began to rise in an organized way, many Buddhists also came to China, China began to face the West and India for more than 1200 years; finally, from the tenth century to the seventeenth century, began to turn to the North, most of the time China was under the rule of the northern nomads – and they were progressively Sinicized, and the Mongols were still the biggest precaution targets of Ming, and eventually Manchus raised in the Northeast.

What happened around 1600? With the huge influx of silver, the status of silver in China has increased after the middle of Ming, consolidating the status of the silver standard from all aspects. Many scholars have emphasized the role of Single Whip. The implementation of Single Whip completely abolished the Hongwu system, succeeded in the two-tax reform of Yang Yan in the middle of Tang, and conceived the incorporation of the labor-service tax into the land tax of Yongzheng in the Qing Dynasty, which turned the Chinese fiscal system from the physical tax to the currency tax. Scholars generally agree that it further increases the degree of economic silvering in the Ming Dynasty. According to the estimation of scholar Peng Xinwei (1958), around 200 years of Ming, the price of gold and silver was from 1:4, 1:5 in the early to 1:10 or even 1:13 in the late. The flow of precious metals seems to be only economic behavior, but its role and side effects are quite long, and even affecting the rise and fall of an empire.

Since the silver mine discovery in Peru, most of the European silver mines were abandoned. Adam Smith (1776) asserted that the American silver mine not only has an impact on the price of European silver, but also on the price of silver in Chinese silver mines. He witnessed the influence of precious metals in Europe in the seventeenth century, and also noticed the impact of transactions between the Old and New World on each other. "It is more advantageous, too, to carry silver thither than gold; because in China ... the proportion between fine silver and fine gold is but as ten, or at most as twelve, to one; whereas in Europe it is as fourteen or fifteen to one ... In the cargoes, therefore, of the greater part of European ships which sail to India, silver has generally been one of the most valuable articles. It is the most valuable article in the Acapulco ships which sail to Manila. The silver of the new continent seems in this manner to be one of the principal commodities by

which the commerce between the two extremities of the old one is carried on, and it is by means of it, in a great measure, that those distant parts of the world are connected with one another”.

At the end of the Ming Dynasty, the exchange relationship between China and the world monetary system was similar to the trade deficit and hot money of the early 21st century. China was regarded as the last destination of European currency at the earliest from the Roman era. Because the balance of payments structure is beneficial to China, silver flows from the world to China. In the seventeenth century, it was especially promoted by American silver. For the great Roman Empire, its vitality was once thought to be exhausted by the massive outflow of precious metals. At this point, silver and the Ming Empire are similar. American scholar Frederic E. Wakeman (1986) believes that the demise of Ming and the prosperity of Qing in 1644 was the most dramatic scene in all the dynasty changes in the history of China, and silver played an important role in it.

The truth of history must be based on comparison. Europe was also experiencing the famous “seventeenth century crisis”, historian Eric Hobsbawm invented the term, mainly indicating a series of crises, economic recession, population decline, social unrest, etc. Furthermore, this crisis was actually a global crisis. One group in the history circle believes that the different ways in which the East and West respond to this almost simultaneous crisis lead to a big diversion of history. Under the “seventeenth century crisis”, the East was considered to continue the pattern of dynasty change, while the West was the first to enter the modern society.

Through silver, China’s turmoil is also secretly linked to the pulse of the world. Wakeman (1986) believes that there is a mutual relationship between the Chinese crisis and the global crisis in the seventeenth century. “China's dominance over Manila has reached such a degree that the long-term cyclical fluctuations between China's trade and world trade have become consistent; even to this extent, the volatility of China’s trade is much larger than that of world trade. Therefore, we can conclude that regardless of the surface phenomenon, it is the rise and fall of trade with China that dominates the Spanish maritime trade itself growth and decline”.

Fortune and misfortune are two buckets in the same well. Since the silver standard established, silver and the fate of the Ming Empire are more closely intertwined. For this fact, historians have different evaluations. Some people emphasize that even if there is no silver the Chinese economy will also develop. The influx of overseas silver is considered to be a symbol of China’s loss of monetary sovereignty. It even believes that this has opened the move up of monetary sovereignty in a history of centuries. (Han, 2009) Until today, some even thought that it was the move out of monetary sovereignty that led to the demise of Ming and the decline of Qing.

In fact, the monetary sovereignty does not have much meaning in the precious metal era, and precious metals are naturally a jump for the classical economy. Even in modern times, monetary sovereignty is not a power that can be won. From the ban on silver to the use of silver in Ming, it was a last resort. Monetary sovereignty is not something that can be won. It is also true that China’s silver production is too small, and the impact of overseas silver inflows is far more than deflation.

The possession of precious metals is almost always the aspiration of all ancient empires, and overseas silver and the Ming Empire complement each other. Since the days of the Roman Empire, Asia only agreed Europe to exchange with precious metals, and Asia mainly accepts silver. China and India have become the final destination of precious metals circulating around the world. China is so eager for silver and can attract the continuous inflow of silver, at first it seems to be an advantage, but it also constitutes its vulnerability. The continuous inflow of silver has led to the establishment of the Chinese silver standard, which has led to an unprecedented increase in

commodity monetization, and once such inflows are exhausted, it will also have a fatal blow to the economy of Ming Dynasty.

In the first half of the seventeenth century, there were many major famines in China. The explanations in the past are often attributed to natural causes. In fact, in addition to this, it can be attributed to the tragic product of long-standing economic and social problems, and even the gold and silver that flooded into Asia is hardly to absolve itself from the blame. These gold and silver contributed to high levels of public spending, rapid urban growth, and fierce economic competition, all of which proved to be social and political corrosives. China's dilemma stems from almost exclusively relying on imported silver to ensure the proportion of money supply. Once the actual amount of American silver inflows into China is drastically reduced, the Ming government quickly falls into the economic nightmare, and the demise of the Ming Dynasty lies in fiscal unsustainable.

Backtracking afterwards, a series of events that were almost accidental but connected in tandem, marked the coffin of the Ming Empire. From 1634 to 1636, Spain decided to limit the amount of Latin American silver flowing into the Philippines. In the winter of 1639, the long-term tension between the Spanish and the Chinese in Manila eventually broke out as violent clashes. More than 20,000 Chinese were killed. The amount of American silver that flow into China through Philippines has been greatly reduced. In the summer of the same year, the Tokugawa government of Japan decided to ban traders from Macao to trade in Nagasaki, and the route that brought a lot of Japanese silver to China was also closed. Under a series of factors, China's silver imports plummeted. With the sharp drop in silver inflows and the collapse of the price of silver and copper coins, these historical clues quietly retracted the economic ropes that were placed around the neck of the Ming Empire.

The reduction of silver has led to the emergence of various silver hoardings and of "factitious diseases". Since many taxes are paid with silver, the burden of taxation becomes unbearable, and many people are bankrupt, and the fiscal revenue extracted by the court was greatly reduced. Under the exhaustion of silver, the price of silver and copper coins has skyrocketed. For the poor people, the purchase power of their copper coins to buy living food has fallen sharply. In addition, it was at the Little Ice Age, the natural disasters continued everywhere, and the food prices skyrocketed after the grain production was reduced. After the disaster in Henan in 1640, the rice price was 3,000 qians (one qian is ten wens) per dou (one dou equals 7.5 kg), and the wheat cost 2,700 qians per dou. From the north to the south, many people starve to death. Due to famine and epidemics, the population has also been reduced by tens of millions, which has led to a civil violence revolution.

Silver is the fuse, and the economic crisis, natural crisis, and population crisis that accompanied the silver crisis have formed a major turning point in the history of the Ming Dynasty. The records of "exile in the road" and "human eat each other" are found in history. Behind the famine is the people's revolution, and various uprisings are emerging. The Li Zicheng troops who annihilated the Ming Dynasty appeared in the northwest. This is not an accident by later historians because it is a land far from silver but near to famine.

The destruction of inflation led to a comprehensive social collapse, which not only led to famine, death, suffering of the people, and rebellion everywhere, but also caused the bureaucrat emoluments to shrink, and thus the legitimacy of dynasty's regime broken down by various corruptions. The food price was rising, while the emolument in silver was relatively stable, which means that the official income was also eroded by inflation. In 1629, the imperial court paid the

bureaucrats and nobles (around 40,000 just in the capital) with 150,000 taels of silver, which is less than 1% of the national budget.

It is conceivable that the incorruptness of Hai Rui (a honest and upright official in Ming Dynasty and Chinese history) is not only a minority, but also appears to be out of place in that era. When seeking illegal incomes became a political unspoken rule, even the emperors of Ming tried their best to enrich the private treasury, and regarded the empire as a private property. The military expenses were tense but “cannot be financed by the private treasury”. Ironically, when Li Zicheng occupied Beijing in the end, there were only 170,000 taels gold and 130,000 taels silver in the private and public treasury of the empire. When the corruption becomes an institutional phenomenon and the upper classes are cruelly exploited the lower classes of civilians, then the collapse of society is inevitable and the demise is not far behind. The economic recession at the end of the Ming was caused by the institutional destruction leading the collapse of the entire society.

Conclusion

It is true that silver has had a profound impact on China's economic monetization and institutional reforms. From the establishment of the silver standard to the destruction of the Ming Dynasty, the continued trade deficit also brought about follow-up issues such as the Opium War. In a sense, the Opium War could also be regarded as a fight for silver. The monetization of silver and the commercialization of the late Ming Dynasty stimulated each other, led to China's partial integration into the world economy on the one hand, and on another hand forced China to experience the depression after the prosperity. For this reason, thinkers in seventeenth century such as Gu Yanwu and Huang Zongxi have mostly negatively evaluated silver. The scholar Wang Fuzhi and many enlightenment scholars have a similar conclusion at that time, that is, silver enlarged the gap between the rich and the poor.

What is written becomes eternal, and words are always the foundation of history. Compared with the ideological complaints of the thinkers about silver, the merchants, who were immersed in silver, could not speak. They are China's long-standing silent business group. The social structure of China's Ming and Qing Dynasties is similar to a “French sandwich”, it is a long loaf of bread, the civilian official group or the scholars; the next long loaf is totally peasant; as for the middle structure has always been weak and irrelevant. Merchant and Artisan class do not have the value of their own existence; hence their legal status and social status can be imagined.

In contrast, the Chinese enlightenments in Ming Dynasty saw the monetary factors in the turning point of the times. On the other hand, the phenomenon of folk suffering also stimulated them to make sharp criticisms, which greatly influenced the judgments of later generations, even this judgment is presented in a more modern and more academic way. But no matter the ancient or today, most people have always ignored the logic of the economy. Silver is not the active choice of the Ming Empire, but the helpless result of the game between the imperial power and the market. It is worth noting that in the history of the rise and fall of Ming, it is important that the reducing of silver inflow — it can be said that silver has made the Ming Dynasty's prosperity and partly created its demise destiny — but the bigger background is that China cannot get out of the constraints of a broken government regime, which is a major failure of the institution.

History cannot be explained or promoted by a single reason. Chinese paranoia about big history often ignores the complexity of reality. Searching for historical truth means approaching the possible truth rather than seeking a single driving force. Silver is the link of history, but it is not the

cause and purpose of history. Silver inflows coexist with international trade, economic marketization and monetization. The acceptance of silver is not officially hoped or promoted. The popularity of silver is still determined by the prosperity of commodity economy in Ming Dynasty. No matter what kind of currency, the final market recognition still comes from the people's choice. The Chinese *Jiao Zi*, European currency and even the last notes farce of the Ming Dynasty prove that the monarch may choose a certain currency and even print his own picture on the currency, but he cannot force people to use it. While the inflow of silver boomed the commercial economy in the late Ming, its inflow exhaustion became one of the many ropes on the neck of the Ming Dynasty.

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Китайская денежная система в эпоху Возрождения: серебряный стандарт и глобализация в эпоху династии Мин

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Как самый ранний эмитент бумажных денег в мире, китайские империи провели большой денежный эксперимент, длившийся около 500 лет, который, несмотря на это, закончился неудачей. В то же самое время с Ренессансом, массивный поток американского серебра потек в Китай из-за великого открытия. Таким образом, серебро окончательно завершило формирование китайской денежной системы и принесло этой древней цивилизации окончательную славу древнего времени. Серебряный стандарт стал дамкловым мечом империи и обнажил один из самых больших социальных недостатков аграрного режима. Мы пытаемся выявить эту «серебряную основу» и понять загадку Нидхэма по денежному измерению.

Ключевые слова: *денежная система, серебряный стандарт, китайская экономическая история, глобализация.*

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