

Monetary Policy as Key to State Authority and Income in Tang China*

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Part I: Introduction

The Tang dynasty was the era when the precursor of paper money appeared and when economic innovations imprinted their mark on the history of China.¹ However,

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¹ The most comprehensive study of money in Tang China is Peng Xinwei's 彭信威 *Zhongguo huobi shi* 中國貨幣史, 2nd ed. (Shanghai: Shanghai renmin chubanshe, 2015), which covers the period from the pre-Qin to the Qing dynasty. He discusses the economic and political conditions that gave rise to the origin of various forms of money; monetary development; and the emergence of fiat money, nearer to the modern era. He also explains the monetary theories in different eras, and their significance. In addition, numerous photos and figures are provided to illustrate the species and design of various coins. Peng's achievement is impressive. In the chapter on the Tang dynasty are four sub-sections: monetary system, purchasing power of coins, monetary studies, and credit institutions. Edward H. Kaplan translated this monumental work into English in 1994. See Peng Xinwei, *A Monetary History of China*, trans. Edward

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there has not been a comprehensive study on the monetary system and policy of the dynasty. This paper aspires to build on earlier scholarship and, using a multi-disciplinary approach, to fill the gap by unearthing the rationale behind the complicated monetary system and often-changing policies of Tang China.² Throughout its 289 dynastic years, the Tang rulers took many different measures to control the monetary market. One key concept behind the measures was the control of the money supply as a tool to regulate purchasing power. Many literati regarded this control as a method to maintain steady price levels, and believed that the ability to regulate prices would earn the court respect for its proper governance. The power to affect the distribution of wealth also made the throne more secure.³

(Note 1—*Continued*)

H. Kaplan (Bellingham, WA: Center for East Asian Studies, Western Washington University, 1994). In the West, Denis C. Twitchett has provided a succinct discussion of Tang currency and credit. See Twitchett, *Financial Administration under the T'ang Dynasty* (Cambridge: Cambridge University Press, 1970), pp. 66–83. Another key figure in the study of monetary policy is Richard von Glahn, who focuses on the post-Tang period. For his representative works, see von Glahn, *Fountain of Fortune: Money and Monetary Policy in China, 1000–1700* (Berkeley and Los Angeles: University of California Press, 1996). His most recent publication provides an overview of the economic history of China from the pre-Qin through the Qing dynasty. See von Glahn, *The Economic History of China: From Antiquity to the Nineteenth Century* (Cambridge: Cambridge University Press, 2016). Earlier, Robert M. Hartwell, who was von Glahn's teacher, made tremendous contributions to the area. The datasets he created under the auspices of his Chinese Historical Studies, now operated by Harvard University, provide a useful means of generating approximate spatial entities correlating to historical administrative units. Hartwell focused on the northern Song dynasty. For a complete list of his publications, see “Publications of Robert Hartwell (1932–1996),” accessed 28 August 2016, <http://faculty.washington.edu/ebrey/hartwell.htm>.

² Despite Peng's great achievement, the last revisions of his work were made in 1962. New archaeological and numismatic evidence has appeared since then, and techniques for analysing coins have advanced, as have scholarly studies that focus on different aspects of monies in Tang China. Because his book is a broad review of the entire monetary history of China, he does not attempt to investigate the central ideas behind the monetary policy in the Tang dynasty. The more influential work in recent years is the special issue of *The Journal of the Royal Asiatic Society* on “Textiles as Money on the Silk Road,” which brought together research by scholars of various backgrounds, including history, art history, archaeology, linguistics, and economics. See special issue: “Textiles as Money on the Silk Road,” *Journal of the Royal Asiatic Society*, 3rd ser., 23, no. 2 (April 2013). There is an introduction to the issue by the editor, Sarah Ansari.

³ Liu Zhi 劉秩 quoted from the *Guanzi* 管子 to support his argument that coinage should be used to regulate prices. He emphasized Guan Zhong's 管仲 idea, stated in the “Qing zhong pian” 輕重篇, that price levels had to be controlled by the emperor so that he held the ultimate

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This paper argues that the monetary policy of the Tang actually had two main priorities, beyond regulating price levels. These were the preservation of state authority and the augmentation of state income. The court had various motives when it implemented new monetary policy. Throughout the nearly three hundred years of the Tang dynasty, there were bound to be shifts in policy and even monetary philosophy. These shifts were largely related to the political and economic situations of the time, although the ideas of the emperor and his subjects also played a role. Nonetheless, this paper shows that the major objective in issuing full-bodied coins was to establish state authority, sometimes even at the cost of losing state income due to the huge production cost. It also reveals that this method no longer functioned when the court could no longer afford to issue such coins. This was manifest during the An Lushan rebellion 安史之亂 (755–763), when the court decided to cry up (i.e., to overvalue) the coinage in 758 and 759 in order to fund military activities. The court turned to using coinage as a means to increase state income so as to meet expenses. Although it faced resistance from the markets, the court managed to extract the much-needed money from its people by using coins of extravagantly large denomination and larger size for state expenditure. These coins began to disappear from the market only when Daizong 代宗 (r. 762–779) came to reign. Throughout the Tang dynasty, the court also instituted various anti-counterfeiting policies. The major aims were again to reinstate sovereignty and also to withhold the rightful seignorage, if there was any.

In order to investigate the two objectives of the court, a complete picture of the Tang monetary system and policy is necessary. This paper discusses the intrinsic problems associated with the Tang's multi-currency system and analyses its various monetary measures, which I argue were implemented to preserve the authority of the sovereign, by issuing full-bodied coins (i.e., their face value is not higher than the intrinsic value of the metal), especially before the An Lushan rebellion that broke out in 755, and to increase state income, mainly by crying up the coinage as a form of indirect taxation, during the An Lushan rebellion. Special focus will be given to silk tabbies (plain-weave bolts of silk, often used as commodity money during Tang times) and bronze coins, and to their limitations. The monetary measures discussed include the issuance of various types of coins in different periods; anti-counterfeiting policies and the reasons that led to counterfeiting, including the shortage of coins; the debate on private casting of coinage; and the regulations on the circulation of monies. To be specific, these regulations concerned the use of bronze coins as a uniform unit

(Note 3—*Continued*)

key to decide whether his people were rich or poor. By doing so, everyone would respect the emperor as if he were the sun and the moon, and they would be also as fond of him as if he were their father and mother. See “Shi huo zhi,” in Liu Xu 劉昫 (887–946) et al., comps., *Jiu Tang shu* 舊唐書 (1975; reprint, Beijing: Zhonghua shuju, 2002), *juan* 48, p. 2097.

for state payment under the progressive Two-Tax system; the operation of “flying money”; and the practice of “counting short of a hundred.” Additionally, this paper analyses the effects of these monetary policies on Tang economy and society, and their significance in Chinese history. It takes a multi-disciplinary approach, using modern economic theories to evaluate Liu Zhi’s 劉秩⁴ illogical claim concerning the relation between money supply and price levels, as well as to analyse the inflation caused by a ban on counterfeit coins, and to discuss the large number of coin hoards in the mid- and late Tang. Numismatic and archaeological evidence are provided to explain certain phenomena. If not specified otherwise, the general account of monetary development is based on the “Shi huo zhi” 食貨志 (Monograph on Food and Money) in the *Jiu Tang shu* 舊唐書 (Old Official History of the Tang) and the *Xin Tang shu* 新唐書 (New Official History of the Tang). Related information can also be found in the “Shi huo” chapter of *Tongdian* 通典 (Encyclopaedic History of the Institutions of Government) and the *Zizhi tongjian* 資治通鑑 (Comprehensive Mirror to Aid in Government). They are cited as supplementary material. The paper cross-references the two official histories with others, highlighting any discrepancies.

This research has uncovered the fact that the major intent of the Tang emperors was to enhance either state authority or state income; their priority would depend on the prevailing political and economic situation. It also discusses the various monetary policies and their effects on the economic system and the people. This research will extend our knowledge of the monetary, economic, and cultural history of Tang China. In terms of monetary history, it sheds light on the problems of the multi-currency system, the logistics behind the policy, and the various attempts made by the court to combat market forces; in terms of economic history, it reveals how monetary policy affected the monetary market and price levels, as well as the challenges posed by market forces, the pressing need for fiat money and the conditions required for its emergence; in terms of cultural history, in the case of Tang China, it reaffirms the Legalist idea that coinage is linked to state power, and disputes the Confucian idea that this power was used to encourage agriculture and to ensure the wellbeing of commoners.⁵ This paper reveals that the ultimate aim of the court was above all the affirmation of its own political authority and the prolongation of its rule.

⁴ He was the son of Liu Zhiji 劉知幾 (661–721), the famous Tang historian who composed the *Shitong* 史通.

⁵ Penelope A. Herbert notes that to the advocates of Legalist policy, control of economic activities was essential to the maintenance of the authority and wealth of the state. The Confucian purists, on the other hand, wished to encourage agriculture in the interests of the welfare of the people. See Herbert, “A Debate in T’ang China on the State Monopoly on Casting Coin,” *T’oung Pao*, 2nd ser., 62, livr. 4/5 (1976), pp. 256–57.

Part II: The Multi-Currency System and the Respective Problems of Coins and Textiles as Money

Modern economists note that money performs the functions of a medium of exchange, a store of liquid wealth, a unit of account, and a standard for deferred payments. Von Glahn noted that the use of money as a means of state payment was also a reason for its importance in pre-modern China. Through its power to tax, and to determine the means by which obligations must be fulfilled, the state could exert considerable leverage over the means of exchange.⁶ In this sense, textile commodities, such as silk tabbies, and metal coins, such as bronze coins, could be classified as money in Tang times. Their concurrent use was also the deliberate policy of Tang court. According to Helen Wang's study, the state inherited a system in which textiles were money objects. The state maintained that system, and collected taxes both in coin and in kind. In fact, silk tabbies and bronze coins were the two main forms of money on the Silk Road.⁷

Coins made of bronze played a major role in inland purchases, especially for smaller transactions. Although silver and gold could also be used as money, they were uncommon and were mostly used by the government and the upper class.⁸

⁶ See von Glahn, *Fountain of Fortune*, pp. 16–18.

⁷ Peng noted that silk tabbies were not used as currency outside Tang China, but recent scholarship reveals otherwise. See Peng, “Tangdai de huobi,” chap. 4 in *Zhongguo huobi shi*, pp. 232–33. Helen Wang has discussed the function of textiles as money in Tang China and on the Silk Road, and she provides a clear explanation of the reasons behind the lack of research output on this important subject. See Wang, “Textiles as Money on the Silk Road?,” *Journal of the Royal Asiatic Society*, 3rd ser., 23, no. 2 (April 2013), pp. 165–74.

⁸ The late Japanese scholar, Katō Shigeshi 加藤繁, did a comprehensive study on the function of gold and silver as money in the Tang and Song dynasties. He argued that these metals were used for various purposes, e.g., as medium of exchange, store of value, awards, bribes, tributes, gifts, and even military provisions. There were also occasions when gold was used as a unit of measurement for precious goods. Originally his Ph.D. dissertation at Tokyo University, this study was later published as *Tō Sō jidai ni okeru kingin no kenkyū* 唐宋時代に於ける金銀の研究 (A Study of Gold and Silver in Tang and Song Dynasties). It has been translated into Chinese. For a revised version of its first translation in 1944, see *Tang Song shidai jinyin zhi yanjiu: Yi jinyin zhi huobi jineng wei zhongxin* 唐宋時代金銀之研究：以金銀之貨幣機能為中心 (Beijing: Zhonghua shuju, 2006). Although Peng disagrees with some of the evidence Katō cited, noting that *jin* 金 does not necessarily refer to gold in some of the literature cited, this book remains a major source in the field. For Peng's argument, see note one of “Tangdai de huobi,” chap. 4 in *Zhongguo huobi shi*, p. 240. For Katō's major arguments concerning the use of silver and gold in Tang China, see Katō, “*Tōdai ni okeru kingin no kahei teki yōto*” 唐代に於ける金銀の貨幣的用途, chap. 2 in *Tō Sō jidai ni okeru kingin no kenkyū* (Tokyo: Tōyō

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Xianzong's 憲宗 (r. 805–820) edict “Jin caiyin kenghu ling caitong zhuzhu zhao” 禁採銀坑戶令採銅助鑄詔 (To Mine Copper in Place of Silver for Coinage) clearly shows that the court was not in favour of silver coins. It forbade silver mining north of the Nanling mountain ranges 南嶺 that separate Guangdong and Guangxi from provinces to the north. It also commanded silver miners to start mining copper instead.⁹ It was clearly stated in the edict that silver was of no use to the people.¹⁰ According to the *Xin Tang shu*, mining even one tael of silver was punishable by exile to another province. It was not until 809 that Xianzong ordered silver mining in the Nanling ranges. Even then, bronze coins could not be taken south of the mountains, to ensure their availability in the central plain.¹¹ This preference for bronze coins makes a striking contrast to Europe, which used silver coins as its major form of money.

Although there were *kaiyuan tongbao* 開元通寶 coins made of gold and silver during Zhongzong's 中宗 reign (684; 705–710), they were often cast for auspicious purposes rather than circulation. These coins, excavated in modern Xi'an, are believed to have been buried by the descendants of Li Shouli 李守禮 (672–741), Prince of Bin 邠王, just before Chang'an fell into An Lushan's 安祿山 (d. 757) hands.¹² Six or seven intact silver *kaiyuan tongbao* were also discovered in Gansu. They were buried no later than the late Tang. These silver coins were likely used for tributes, bestowal, gifts, or large transactions among the upper class.¹³

(Note 8—Continued)

Bunko, 1965), pp. 13–162. Wei Daoming 魏道明 noted that precious metals, such as gold and silver, were used for large transactions due to their higher intrinsic value. This was particularly so for coastal areas such as Guangzhou, which was a centre for international trade. See Wei Daoming, “Tangdai huobi zhidu zakao” 唐代貨幣制度雜考, *Qinghai shifan daxue xuebao* 青海師範大學學報, 1994, no. 4, pp. 61–66, 73. For a study on the use of gold in decorating artefacts in ancient China, see Emma C. Bunker, “Gold in the Ancient Chinese World: A Cultural Puzzle,” *Artibus Asiae* 53, no. 1/2 (1993), pp. 27–50.

⁹ The Nanling ranges are Yuecheng 越城, Dupang 都龐, Mengzhu 萌渚, Qitian 騎田, and Dayu 大庾. They are situated along the border next to the modern provinces of Hunan, Jiangxi, Guangdong, and Guangxi.

¹⁰ See Xianzong's edict “Jin caiyin kenghu ling caitong zhuzhu zhao,” in Zhou Shaoliang 周紹良, ed., *Quan Tangwen xinbian* 全唐文新編 (Changchun: Jilin wenshi chubanshe, 2000), *juan* 59, pp. 738–39.

¹¹ See “Shi huo zhi,” in Ouyang Xiu 歐陽修 (1007–1072) and Song Qi 宋祁 (998–1061), comps., *Xin Tang shu* (Beijing: Zhonghua shuju, 1975), *juan* 54, p. 1389.

¹² See Guo Moruo 郭沫若, “Chutu wenwu ersan shi” 出土文物二三事, *Wenwu* 文物, 1972, no. 3, pp. 2–10. He noted that the Japanese were influenced by the Tang government and thus also had coins made of silver.

¹³ See Li Daxiang 黎大祥, “Gansu Wuwei faxian Tangdai jiaocang qianbi—chutu yin kaiyuan tongbao” 甘肅武威發現唐代窖藏錢幣——出土銀開元通寶, *Gansu jinrong* 甘肅金融, 1999, no. 7, pp. 46–50; idem, “Gansu Wuwei Tangdai qianbi jiaocang faxian yin kaiyuan” 甘肅武威唐代錢幣窖藏發現銀開元, *Zhongguo qianbi* 中國錢幣, 2000, no. 1, p. 78.

The metal coins in favour at the time were bronze. According to Zhou Weirong's 周衛榮 study, the preference for bronze can be traced all the way back to the Chinese bronze age, when bronze was a precious metal used to make objects including ritual vessels, weapons, musical instruments, farming tools, and ornaments. The relative composition of the alloy had been mastered early, and complex casting techniques were already being used. Zhou refutes previous scholarship that considered the emergence of bronze coins to be a transition from farming tools, once used as commodity monies. Instead, he proposes three stages in the development of money: cowrie shells; bronze currency of controlled weight, together with cowrie shells; and bronze coins.¹⁴

Silk tabbies and hemp cloth were the two major forms of textile commodity money; in circulation, silk was more popular. As the major form of commodity money, silk tabbies were used for larger transactions, and more importantly, as international money on the Silk Road.¹⁵

The *Xin Tang shu* records advice given by Yang Yuling 楊於陵, Minister of the Board of Finance 戶部尚書, to the emperor Muzong 穆宗 (r. 820–824). Yang noted that before the Dali 大曆 era (766–779), tin and iron coins had also been used as money in Ziqing 淄青 (primarily covering modern Shandong), Taiyuan 太原 (modern Shanxi), and Weibo 魏博 (modern Hebei), whereas gold, silver, cinnabar, and ivory had been used in Lingnan 嶺南 (modern Guangzhou).¹⁶ Yuan Zhen's 元稹 (779–831) “Qianhuo yizhuang” 錢貨議狀 (On Coins and Goods), composed in the fifteen year of Yuanhe 元和 (820),¹⁷ also noted that in the Lingnan region, gold and silver were used as money. The fact that silver was used as money there explains why Xianzong allowed the mining of silver in the Nanling ranges in 809. Yuan added that in the Ba 巴 area (in modern Sichuan), salt and textiles were used. In Qianzhou 黔州, Wuzhou 巫州, Xizhou 溪州, and Xiazhou 峽州 (in modern Sichuan and Guizhou), mercury, cinnabar, silk tabbies, and even scarves and hats were used for exchange.¹⁸ Yuan's memorial reveals that until Xianzong's reign, commodity monies other than textiles were still used in regional areas.

¹⁴ See Zhou Weirong, “Shilun woguo gudai qingtong huobi de qi yuan” 試論我國古代青銅貨幣的起源, in idem et al., *Qianbixue yu yezhushi luncong* 錢幣學與冶鑄史論叢 (Beijing: Zhonghua shuju, 2002), pp. 141–51; and its English version, “A Study of the Origins of Bronze Coinage in China,” *ibid.*, pp. 402–10.

¹⁵ See Helen Wang, “Textiles as Money on the Silk Road?,” pp. 165–74.

¹⁶ See “Shi huozhi,” in *Xin Tang shu*, *juan* 52, pp. 1360–61. This information is not recorded in the *Jiu Tang shu*.

¹⁷ The year of composition is based on Zhou Xianglu 周相錄, ed., *Yuan Zhen ji jiaozhu* 元稹集校注 (Shanghai: Shanghai guji chubanshe, 2011), *juan* 34, p. 939.

¹⁸ See Ji Qin 冀勤, ed., *Yuan Zhen ji* 元稹集 (1982; reprint, Beijing: Zhonghua shuju, 2000), *juan* 34, p. 396.

Another interesting point to note is the popularity of tin and iron coins in the Ziqing, Taiyuan, and Weibo areas, despite the fact that such coins were noticeably inferior to bronze coins.¹⁹ In fact, iron was the major impurity in bronze coins. It usually entered the coins with the copper, so its presence reflects the quality of copper, the kind of copper ore it was extracted from, and the level of the metallurgical techniques used in removing it. Unlike iron, tin was a necessary component that increased the sturdiness and brightness of coins. When the proportion was controlled properly to above 6–7% and below 20%, the coins were more resistant to abrasion and had a brighter shine. Once the percentage went over 20%, however, the coins became brittle.²⁰ The fact that tin and iron coins, both noticeably inferior to bronze coins, were commonly accepted in the Shandong, Shanxi, and Hebei areas reveals that the monetary policy of a unified bronze coinage was not effectively exercised throughout the state.

This inability to effect the uniform use of bronze coins was attributed to two reasons, which were discussed by Wang Yichen 王怡辰. The first one had to do with natural resources. Copper ores were unavailable in these areas. The considerable quantities of iron ore thus gave rise to the casting of iron coins. The second reason was political. These areas were basically controlled by the military governors of the three garrisons in the Hebei area, which had become semi-independent after the An Lushan rebellion. They did not follow the monetary policy of the Tang government. One prominent example was their protection of Buddhist temples during Wuzong's 武宗 (r. 840–846) suppression of Buddhism. While Wuzong was having Buddhist images and articles melted down to cast *Huichang kaiyuan* 會昌開元 coins (inaugural coins of the Huichang era), no such coins were made in the Hebei areas. The business transactions in these areas relied heavily on commodity monies such as silk tabbies and livestock, and for more precious goods, gold. Iron coins were used as supplements, while there was a severe shortage of bronze coins.²¹ The regional differences are thus also a reflection of the sovereign power to execute monetary

¹⁹ Iron coins were worth less because iron as a metal was cheap, and because iron was heavy in relation to its value. These coins were used as a medium of exchange only when there was a shortage of copper. See Zhou Weirong, “Shilun woguo gudai tieqian de qi yuan” 試論我國古代鐵錢的起源, in *Qianbixue yu yezhushi luncong*, pp. 152–58.

²⁰ See Dai Zhiqiang 戴志強 and Zhou Weirong, “Zhongguo lidai tongzhu bi he jin cheng fen tantao” 中國歷代銅鑄幣合金成分探討, in *Qianbixue yu yezhushi luncong*, pp. 57–74; and its English translation, “Studies of the Alloy Composition of More Than Two Thousand Years of Chinese Coins (5th Century b.c.–20th Century a.d.),” *ibid.*, pp. 307–28.

²¹ See Wang Yichen, “Zhong-wan Tang Hebei sanzhen jiaoyi de meiji” 中晚唐河北三鎮交易的媒介, *Tongshi yanjiu jikan* 通識研究集刊 8 (December 2005), pp. 17–36.

policy. These differences also posed difficulties in the court's war against counterfeit coins, which were often composed of tin, iron, and lead.

In spite of regional differences, it was also the court policy to practise a multi-currency system that involved both metal and commodity monies. According to modern economics, money arises due to the need for transactions, especially when the division of labour becomes increasingly distinct and people seek a better life. The most primitive form of trade is barter, which requires a coincidence of wants. To reduce the cost of transactions involved in seeking out the proper swap, goods that are in high demand are eventually used as commodity monies to facilitate exchange. As commodity monies suffer from various problems, such as durability, divisibility, and homogeneity, metal money arose. However, metal money also suffers from the problem of low portability, and thus paper money emerged.

In monetary history, economists have labelled commodity monies a primitive form of money, though Wang disagrees in the case of the textiles used in Tang China and on the Silk Road. Textiles as money were indeed multifunctional, suiting the needs of issuers, taxpayers, and the end-users, she suggests.²² At the same time, the co-existence of metal and commodity monies was also a sign of market expansion. As it grew, the demand for metal coins increased.²³ The use of commodity money thus became an effective way to alleviate the pressure on the demand for coins. From the mid-Tang period onwards, deflation caused by the shortage of coins had become an issue of grave importance. The shortage was increasingly severe for various reasons, and the court made several attempts to impose the use of silk tabbies as money. Although a multi-currency system helped to meet the demand for money in general, both silk tabbies and bronze coins caused problems when functioning as money.

First of all, silk tabbies had low divisibility and durability. Their value decreased if subject to small division and prolonged storage.²⁴ Homogeneity was also a problem. Silk tabbies could be categorized into different grades and lengths—a Turfan market register preserved in Dunhuang recorded three estimated rates based on the quality

²² See Helen Wang, "Textiles as Money on the Silk Road?," pp. 165–74.

²³ Peng applauds Liu Zhi's argument that an increase in population also caused an increase in demand for coins, noting that Liu was the first to raise this point. See Peng, "Tangdai de huobi," chap. 4 in *Zhongguo huobi shi*, p. 269.

²⁴ There was an episode that demonstrates how prolonged storage could cause damage to silk tabbies. In 818, the government sold silk tabbies that had long been warehoused at the palace. To curry favour with the emperor, Huangfu Bo 皇甫鎛, chief minister at the time, purchased them at a high price and sent them to the border armies as provisions. It was reported that the silk tabbies fell into pieces at a touch, and the armies ended up burning them all. See Sima Guang 司馬光 (1019–1086), *Zizhi tongjian* (1956; reprint, Beijing: Zhonghua shuju, 2005), *juan* 240, p. 7753.

of the silk submitted;²⁵ still, pieces of silk tabby could hardly be identical. Their advantage was silk's nature as a commodity; it had a value of its own beyond its monetary use. The drawback, however, was that the supply of silk as money was also subject to productivity and to the demand for it as a textile.

Productivity greatly suffered after the An Lushan rebellion broke out. Frequent warfare disrupted sericulture and silk production. Additionally, the court lost control over the modern Hebei and Shandong areas, where high-quality silk was produced, to recalcitrant military governors.²⁶ The decrease in supply was accompanied by an increase in demand to meet military expenses and to cement relationships with the Uighurs, who had provided great support in recovering the two capitals from rebels. The court had to bestow a large quantity of silk tabbies on them as reward for their loyalty. To secure the partnership, the Tang also established marital alliances and horses-for-silk trades with them. The *Xin Tang shu* noted that each year the Uighurs brought in 100,000 horses, while the court gave them over a million bolts of silk in return.²⁷ Although there have been arguments concerning the exchange rate and the actual number of horses brought in for trade,²⁸ the amount of silk given to the Uighurs was substantial. The increase in demand for silk eventually caused a decline in quality.

²⁵ The same type of textiles, including silk, was classified into superior, mediocre, or inferior based on quality. See Éric Trombert and Étienne de La Vaissière, “Le prix des denrées sur le marché de Turfan en 743,” in *Études de Dunhuang et Turfan*, ed. Jean-Pierre Drège with Olivier Venture (Genève: Droz, 2007), pp. 1–52.

²⁶ Wu Baosan 巫寶三 noted that the Henan areas produced the best quality of silk; Hebei areas ranked second. After the An Lushan rebellion, silk production had to move to the south. See Wu, “Shishi guanyu Tangdai sizhiye shangren de yize shiliao” 試釋關於唐代絲織業商人的一則史料, *Zhongguo jingjishi yanjiu* 中國經濟史研究, 1996, no. 2, p. 96. Matsui Shūichi 松井秀一 also noted that the major regions of sericulture and silk production were the Henan and Hebei circuits. See Matsui, “Tōdai ni okeru sansō no chikisei ni tsuite—Ritsuryōsei ki no sansō kankei shiryō wo chūshin ni” 唐代における蚕桑の地域性について—律令制期の蚕桑関係史料を中心に, *Shigaku zasshi* 史學雜誌 85, no. 9 (September 1976), pp. 1249–89. Arakawa Masaharu 荒川正晴 also asserted that Henan and Hebei produced the best plain silk and remained the key regions for its production, even when the silk industry also flourished in the Huai and Yangtze River valleys during the late Tang period. See Arakawa, “The Transportation of Tax Textiles to the North-West as Part of the Tang-Dynasty Military Shipment System,” trans. Valerie Hansen, *Journal of the Royal Asiatic Society*, 3rd series, 23, no. 2 (April 2013), p. 254.

²⁷ See *Xin Tang shu*, *juan* 51, p. 1348.

²⁸ Denis Sinor argued that the figure of 100,000 horses must be a mistake. He noted that it was unlikely that the Uighurs bred more than a few tens of thousands of horses per annum for export to China. See Sinor, “The Uighur Empire of Mongolia,” chap. 5 in *Studies in Medieval Inner Asia* (Aldershot, Hampshire; Brookfield, VT: Ashgate, 1997), pp. 1–29. For a discussion
(Continued on next page)

This is clearly revealed in Bo Juyi's 白居易 (772–846) poem “Yinshan dao” 陰山道 (Yin Mountain Route). Although it criticizes the Uighurs for their insatiable demand, it also reveals that some of the silk that the Uighurs received for trade was far below standard. It reads:

Unable to weave enough silk, women toiled in hardship.
They wove sparsely and made short pieces to fulfil the quota in bolts—
Slightly over three *zhang* of silk, resembling lotus roots and spider webs.
The Uighurs complained and declared them useless.
縑絲不足女工苦，疏織短截充匹數。
藕絲蛛網三丈餘，迴鶻訴稱無用處。²⁹

The poem shows that the quality of silk suffered in times of shortage. The excessive demand for silk tabbies posed such a great burden on weavers that it became a social problem. Matters were made worse when there was also a high demand for fine-quality silk products. Daizong's edict “Jinduan zhizao yinqiao zhao” 禁斷織造淫巧詔 (To Forbid Over-Embellishment of Weaving) was issued to prevent the production of deluxe silk products.³⁰ Nonetheless, the situation persisted during Xianzong's reign. Another poem by Bo Juyi, “Liaoling” 繚綾 (Silk Crepe), further reveals that fine silk products were used wastefully by palace ladies.³¹ His poem “Hongxian tan” 紅線毯 (Red Silk Carpet) criticizes the governor of Xuanzhou 宣州 (in modern Anhui) for presenting as tribute silk carpets that were over ten *zhang* in length. According to Zhu Jincheng, the practice began in the Zhenyuan 貞元 era (785–805).³² Yuan Zhen's “Yinshan dao,” composed in 809, before Bo Juyi's poem, also mentioned that the high demand for silk was partially fuelled by the rich and the powerful.³³ Again, in 817, Yuan wrote “Zhifu ci” 織婦詞 (On Weavers) to lament the hardship of weaver-women striving to satisfy the excessive collection of taxes in silk to provide for the military. Their talent was such an asset that they were prevented

(Note 28—Continued)

of the exchange rate and the past scholarship on this issue, see Tan Mei Ah, “Exonerating the Horse Trade for the Shortage of Silk: Yuan Zhen's ‘Yin Mountain Route,’” *Journal of Chinese Studies* 57 (July 2013), pp. 49–96.

²⁹ See Zhu Jincheng 朱金城, ed., *Bo Juyi ji jianjiao* 白居易集箋校 (1988; reprint, Shanghai: Shanghai guji chubanshe, 2003), *juan* 4, p. 231.

³⁰ See Daizong's edict “Jinduan zhizao yinqiao zhao,” in *Quan Tangwen xinbian*, *juan* 47, pp. 590–91.

³¹ See Zhu, *Bo Juyi ji jianjiao*, *juan* 4, p. 225.

³² *Ibid.*, p. 222.

³³ See Yuan Zhen *ji*, *juan* 24, pp. 290–91.

from marrying so that they could keep weaving for the household.³⁴ In sum, the demand for fine silk products and for silk tabbies used as money sapped the energy of weavers and made further increase in output difficult.

In spite of the shortage of silk tabbies in the aftermath of the An Lushan rebellion, there was a significant drop in the conversion rate between silk tabbies and bronze coins soon after the Two-Tax system was implemented in 780; the shortage of coins was far greater than the shortage of silk. The reasons for this were multifaceted. The calculation of tax payments in coins, the decreased volume of coinage, the increasing demand for copper to make Buddhist religious icons and ritual implements, and the hoarding of coins for investment, business, and precautionary purposes all played a role. In fact, from the middle of the eighth century onwards, the scarcity of coins became so severe that at Dunhuang, all metallic money completely disappeared for at least two centuries. According to Éric Trombert, all the Dunhuang manuscripts of a financial or economic nature, from the end of the eighth century to the latest, dated around 1030, indicate that payments were made in grain or in textiles for all transactions.³⁵ It should be noted that, although the conversion rate between silk tabbies and coins had dropped, it was still higher than that of High Tang, when the supply of silk was plentiful.

In comparison to silk tabbies, bronze coins could be stored for long periods without damage, but they were heavy and bulky for their monetary value. Their production was also heavily based on the availability of metal, and their alloy composition could easily differ. Xuanzong's 玄宗 (r. 712–756) edict “Xiaohui e'qian zhao” 銷毀惡錢詔 (To Melt Bad Coins) reveals that there were regional differences in quality. He ordered the reinstatement of the standard for proper coinage, and the recasting of those coins that did not meet it.³⁶ What complicated the situation was counterfeiting. People tried to reap a profit by casting coins that contained less copper, passing them off as full-bodied coins. The fact that coins were cast using the technology of moulding also made them easy to counterfeit.³⁷ Frank H. H. King

³⁴ Ibid., *juan* 23, p. 260. The year of composition is based on Yang Jun 楊軍, *Yuan Zhen ji biannian jianzhu: Shige juan* 元稹集編年箋注: 詩歌卷 (Xi'an: San-Qin chubanshe, 2002), pp. 706–7.

³⁵ See Éric Trombert, “The Demise of Silk on the Silk Road: Textiles as Money at Dunhuang from the Late Eighth Century to the Thirteenth Century,” *Journal of the Royal Asiatic Society*, 3rd ser., 23, no. 2 (April 2013), p. 328.

³⁶ See Xuanzong's edict “Xiaohui e'qian zhao,” in *Quan Tangwen xinbian*, *juan* 30, p. 373.

³⁷ In 1992, a pottery mould was excavated in Wangcheng 望城 in Hunan. Before its discovery, there was much speculation about the method of coinage used in the Tang. See Zeng Jingyi 曾敬儀, “Hunan Wangcheng chutu kaiyuan tongbao can taofan” 湖南望城出土開元通寶殘陶

(Continued on next page)

noted that the most unusual feature of the Chinese monetary system was the complete inability of the imperial government to maintain the standard of its coins or to prevent counterfeiting and general tampering with the coinage. He noted that this ineffectiveness had to do with the primitive casting method, and was demonstrated by defects in the legal coinage, which encouraged imitators, and led to a progressive deterioration that the imperial government proved powerless to check.³⁸

Since the technology used was moulding, the major difference between private and government coins was alloy composition, not size and weight. This has been clearly described by Zhou Weirong and Fan Xiangxi 樊祥熹.³⁹ Counterfeiting became a serious problem, especially under the reign of Gaozong 高宗 (649–683), who issued debased coins with a face value higher than that of *kaiyuan tongbao*, and later under Suzong's 肅宗 reign (756–762), when he overvalued the large-denomination coins that he had ordered to be cast. Whenever the face value was much higher than the intrinsic value, people had an incentive to counterfeit; when the face value was much lower than the intrinsic value, coins were melted for their metal. Since the standard bronze coins consisted of a large proportion of copper, which had a good number of uses, this is what happened in the latter half of the Tang period, when copper became more valuable for non-monetary use, such as the manufacture of utensils and statues.

The insufficient supply of coins was an endemic problem throughout Tang monetary history. It inevitably fuelled counterfeiting. Any addition to the money supply was welcome, so long as it could be accepted as a means of exchange. For this reason, whenever a new anti-counterfeiting measure was announced, it faced strong resistance from the market. Adding to the complexity were human psychology and the inefficient transmission of information. Those who were already in possession of counterfeit coins would want them to continue to function as money; and those

(Note 37—Continued)

範, *Zhongguo qianbi*, 1993, no. 1, p. 31. The earliest Tang coin excavated that was used as a master coin for moulding was a *Qianyuan zhongbao* 乾元重寶. It is kept in the Shanghai Museum. See Zhou Xiang 周祥, “Jianshu Shanghai bowuguan shoucang de lidai zhongyao qianbi” 簡述上海博物館收藏的歷代重要錢幣, in the conference proceedings for the International Conference on Currency and Commerce in Ancient China 中國古代泉幣與經貿國際學術研討會 (Hong Kong: Hang Seng Management College, 13–14 July 2015), p. 41. For a study of the casting method used in coinage, see Wang Liyan 王儷閻, *Zhongguo gudai fanzhu qianbi gongyi* 中國古代範鑄錢幣工藝 (Shanghai: Xuelin chubanshe, 2014).

³⁸ See Frank H. H. King, *Money and Monetary Policy in China, 1845–1895* (Cambridge, MA: Harvard University Press, 1965), p. 45.

³⁹ See Zhou Weirong and Fan Xiangxi, “Tangdai ‘cixing qian’ yantao” 唐代「磁性錢」研討, in *Qianbixue yu yezhushi luncong*, pp. 32–36.

who were in the selling business would accept these coins so long they could pass them off to others. The inability to enforce the law on the use of standard coins also resulted in regional differences regarding acceptable means of exchange. As mentioned earlier, counterfeit coins differed from regular coins mostly in terms of their alloy composition. Those that had the same size and weight as legal tender were particularly difficult to detect.

The fact that both forms of monies, silk tabbies and coins, carried intrinsic value meant that their supply for monetary purposes was also affected by the demand for them as commodity and metal, respectively. When more silk tabbies were demanded for clothing, fewer were available as a medium of exchange. Similarly, when copper was highly sought after for making artefacts, less was available for casting coins. Both conditions would result in an increase in their purchasing power due to their scarcity. For coins, the situation was even more complicated. This is because there was a designated nominal value assigned to coins. The court, disregarding market forces, struggled to maintain the regular copper content of legal coins. The reason behind this was largely political. The standard *kaiyuan tongbao* (inaugural treasure for transactions) coins used throughout the Tang dynasty were basically full-bodied coins with the metal value close to the face value. Although their quality declined in the later period, the court was still striving to cast *kaiyuan tongbao* coins that were as close to the original standard as possible. If debased coins had to be cast, or if crying up the coinage was necessary, the court would often give the coins a different name. Below is a detailed discussion of the political significance of the issuance of these coins.

Part III: The Issuance of *Kaiyuan Tongbao* as a Means to Establish State Authority

Throughout the Tang dynasty period, the court struggled to maintain control of the monetary market through various decrees and other measures. The issuance of coins was a major one. The *kaiyuan tongbao* coin was the dominant type in circulation throughout the Tang dynasty. Those cast in 845 during the Huichang 會昌 era (841–846) were also known as *Huichang kaiyuan*. There were also *Dali yuanbao* 大曆元寶 (primary treasure of the Dali era) cast between 766 and 779, *Jianzhong tongbao* 建中通寶 (treasure for transactions in the Jianzhong era) cast between 780 and 783, and *Xiantong xuanbao* 咸通玄寶 (primary treasure of the Xiantong era) cast in 870. There has been a controversy over whether *Dali yuanbao* and *Jianzhong tongbao* were official coins. These four types of coins were all cast after the An Lushan rebellion. They shared the same inferior craftsmanship and lower copper content. In addition to these, the *Qianfeng quanbao* 乾封泉寶 (flowing treasure of the Qianfeng

era) was cast. It was larger but lighter, according to the two Tang histories, but the court raised its nominal value to ten times the value of *kaiyuan tongbao*. The excavated coins, however, are sometimes heavier. In 758 and 759, Suzong cried up the coinage and issued larger and heavier coins named *Qianyuan zhongbao* 乾元重寶 (great treasure of the Qianyuan era) and *chonglun Qianyuan zhongbao* 重輪乾元重寶 (great treasure of the Qianyuan era with double rims). Both types had an excessive increase in nominal value and were no different from debased coins in nature.

The most influential coin issued in Tang times was the *kaiyuan tongbao* coin. Not only was its coinage full of political and economic significance, but it also affected the coinage system of neighbouring countries. Its coinage was said to have marked the second revolution, after that of the first Qin Emperor (r. 221–210 b.c.).⁴⁰ Three years after the Tang Empire was established, the issuance of the *kaiyuan tongbao* symbolized the fundamental monetary policy of the dynasty: stability and standardisation of the coinage. According to the two Tang histories, this policy was necessary due to the chaotic monetary system of the Sui dynasty. At the end of the Sui, coinage was debased, and counterfeiting was common. A thousand coins weighed only two *jin* 斤 (catties), and eventually the weight dropped below one catty.⁴¹ Moreover, uncoined pieces of iron and bark paper were also being used as money. Even at the capital of Chang'an, very light, round coins were used as medium of exchange. Eighty or ninety thousand of them would fill only half a bushel.⁴² The need for a new coinage was urgent.

The coinage and nomenclature of *kaiyuan tongbao* coins were the result of careful consideration. Despite the chaotic situation during the transition from the Sui to the Tang dynasty, the coins were not issued until the fourth year of the Wude 武德 era (621). Unlike many former coins that were named after their weight, *kaiyuan tongbao* was named for its function and its symbolic value. According to Tang Shifu's 唐石父 study, this emphasis on the function of coins, as well as the use of *tong* 通 to indicate their circulation, was an inheritance from the coinage of the Northern Zhou dynasty (557–581).⁴³ The use of *bao* 寶 (treasure) to refer to coins can also be traced to Wang Mang 王莽 (45 b.c.–a.d. 23).⁴⁴ The use of "treasure" to replace the designation of weight eventually became the standard for future dynasties.

⁴⁰ See Yu Liuliang and Yu Hong, *Chinese Coins: Money in History and Society* (San Francisco: Long River Press, 2004), p. 4.

⁴¹ One catty is equivalent to 16 ounces, or one pound.

⁴² See "Shi huo zhi," in *Xin Tang shu*, *juan* 54, p. 1383.

⁴³ See Tang Shifu, "Tangdai qianbi wenhua de jicheng" 唐代錢幣文化的繼承, *Shaanxi jinrong* 陝西金融, 1988 supplementary volume, pp. 25–28.

⁴⁴ See Peng, "Tangdai de huobi," chap. 4 in *Zhongguo huobi shi*, p. 214.

The political and economic implications behind the coin inscription were noteworthy. Although coins issued later in the Tang dynasty were sometimes labelled with the dynastic era, here *kaiyuan* simply refers to the coming of a new age, and not to the Kaiyuan era (713–741) of Xuanzong's reign. The use of *kaiyuan* indicated Emperor Gaozu's 高祖 (r. 618–626) ambition to create a standard for ages to come and to establish the authority of the empire.

The two significant types of coins previously issued in Chinese history were *banliang* 半兩 (half a tael) in the Qin dynasty (221–206 b.c.) and *wuzhu* 五銖 (five *zhu*; one *zhu* equals one twenty-fourth of a tael) in the Han dynasty (202 b.c.–a.d. 220). The latter had been in use for over seven hundred years. The monetary value of both coins was determined by their weight, which was considered their intrinsic value. As history reveals, however, this did not deter the court from issuing debased coins, nor the people from counterfeiting, with the result that the *wuzhu*'s value had little connection to the “five *zhu*” weight. Nonetheless, the change of inscription from weight designation to a general term suggests that its nominal value would be left for the Tang court to determine.

When the Northern Zhou dynasty (557–581) had issued coins without indicating weight, there had also been a hidden agenda to cry up the coinage. During the twenty-four years of the Northern Zhou dynasty, there were three changes of inscription, namely *buquan* 布泉 (to circulate like water), *wuxing dabu* 五行大布 (wide circulation like the five phases), and *yongtong wanguo* 永通萬國 (eternal pass for generations to come). Each change indicated an escalation of monetary value without a proportionate increase in weight. One *buquan* coin was valued at five *wuzhu* coins in the Western Wei (535–556). One *wuxing dabu* was valued at ten *buquan* coins, or fifty *wuzhu* coins. One *yongtong wanguo* was valued at ten *wuxing dabu* coins, or five hundred *wuzhu* coins. The court strove to compensate for the insufficient weight by a refinement in craftsmanship, including the coin inscription and the metal used.⁴⁵ Such an escalation of monetary value was made legal by the government, although the coins no longer bore the actual weight that corresponded to their name.

Although the omission of the weight in coin inscriptions might conceal the metal content of coins, there was no sign that Gaozu intended to imitate the Northern Zhou in overvaluing the coinage. In fact, he took great care to find the proper standard for the *kaiyuan tongbao* coins. Not only were the *kaiyuan tongbao* full-bodied coins, they were also designed to be perceived as ideal.

One prominent piece of evidence that proves the nature of *kaiyuan tongbao* as full-bodied coins was the change of the Chinese weight system to a decimal system,

⁴⁵ For a description of these coins, see Tang Shifu, “Tangdai qianbi wenhua de jicheng,” pp. 25–28.

using *qian* 錢 (literally “coin”) as the base unit. The original weight system had twenty-four *zhu* 銖 as one tael. Since one *kaiyuan tongbao* coin was supposed to have a weight of two *zhu* and four *can* 參, that is, 2.4 *zhu*, ten such coins weighed one tael. The *qian* thus replaced *zhu* as a unit of weight, which led to the rise of a decimal system. This suggests that the coins were meant to be cast using a firm standard of weight. Although in reality there were variations due to the nature of the copper ores available, the metallurgy methods used, and the enforcement of law, the standard weight was slightly less than 4 grams. This standard was maintained all the way through the Qing dynasty.⁴⁶ As history reveals, the specifications for the *kaiyuan tongbao* set the coinage standard for almost 1,300 years. Moreover, the inscription *tongbao* became a common way of referring to Chinese coins. The name *tongbao* was also used on the ancient coins of Japan, Vietnam, and Korea.⁴⁷

The coins followed the specifications for the *wuzhu* coins of the Western Han dynasty (206 b.c.–a.d. 25). According to the two Tang histories, the coins had a diameter of eight *fen* 分 and weighed two *zhu* 銖 and four *can* 參. Ten such coins weighed one tael, whereas a thousand weighed six catties and four taels. Peng notes that some *kaiyuan tongbao* coins weighed 4 and 4.08 g, which did not comply with the standard. He also refers to *Tang liudian* 唐六典 (Six Canons of the Tang), which noted that a thousand coins originally weighed six catties and four taels, but later there were cases where they weighed up to seven catties, or 4.18 g each.⁴⁸

The coins are generally said to have had a diameter of 2.4 cm, weighing about 3.5 g by modern standards.⁴⁹ The National Museum of China in Beijing has several

⁴⁶ Kuroda Akinobu 黒田明伸 notes that the most prominent feature of Chinese coins was their consistency in terms of weight, which was maintained for two thousand years. See Kuroda, *Kahei shisutemu no sekaishi—‘hi taishō sei’ wo yomu* 貨幣システムの世界史—〈非対称性〉をよむ, rev. ed. (Tokyo: Iwanami shoten, 2014), p. 99. Kuroda focuses on the comparison of Chinese monetary history to that of contemporary world history. He specializes in the post-Tang period, especially the Qing dynasty. His other representative work is *Chūka teikoku no kōzō to sekai keizai* 中華帝国の構造と世界経済 (Nagoya: Nagoya daigaku shuppankai, 1994).

⁴⁷ The first type of coins cast by the Japanese government was an imitation of the *kaiyuan tongbao* coins. In 708, a large copper mine was discovered in Musashi 武蔵 State; thus, the era was renamed “Wadō” 和銅. See Chen Zunxiang 陳尊祥, “Tangdai huobi dui Riben huobi de yingxiang ji qita” 唐代貨幣對日本貨幣的影響及其他, *Shaanxi jinrong*, 1988 supplementary volume, pp. 29–30. The earliest coins cast in Korea were those of *Qianyuan zhongbao*, with *dongguo* 東國 (eastern state) cast on the back. See Peng, “Tangdai de huobi,” chap. 4 in *Zhongguo huobi shi* (Shanghai: Shanghai renmin chubanshe, 1958), p. 180. This information is not given in the 2015 edition.

⁴⁸ See Peng, “Tangdai de huobi,” chap. 4 in *Zhongguo huobi shi*, p. 215.

⁴⁹ See Yu and Yu, *Chinese Coins*, p. 12.

kaiyuan tongbao with different specifications. Below is one with a diameter of 2.4 cm, but a weight of 4 g.⁵⁰



Diameter: 2.4 cm; weight: 4 g

There is another one that is slightly larger and heavier, with a diameter of 2.5 cm and a weight of 4.5 g.⁵¹

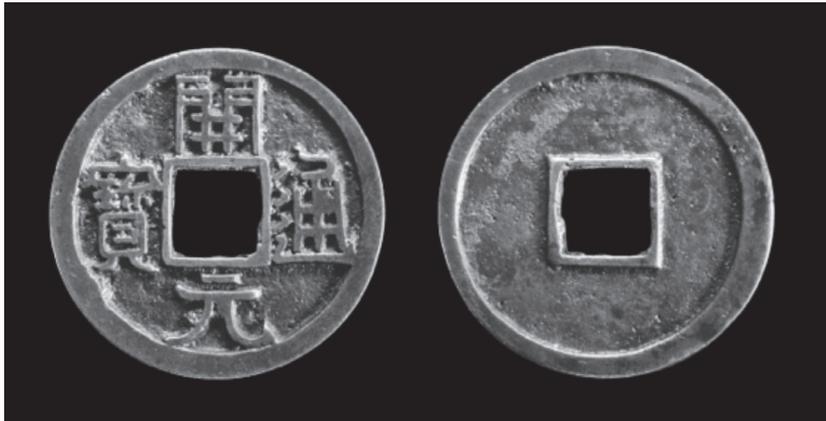


Diameter: 2.5 cm; weight: 4.5 g

The *kaiyuan tongbao* at the British Museum in London also has a diameter of 2.5 cm, but weighs only 4.1 g. The difference in weight suggests a difference in alloy composition. A smaller percentage of iron, for example, can result in a lighter weight. Below are the photos provided by the museum.

⁵⁰ The photos and figures were obtained from the official website of the National Museum of China, accessed 22 August 2016: <http://www.chnmuseum.cn/tabid/212/Default.aspx?AntiqueLanguageID=467/>.

⁵¹ The photos and figures were obtained from the official website of the National Museum of China, accessed 22 August 2016: <http://www.chnmuseum.cn/tabid/212/Default.aspx?AntiqueLanguageID=3157/>.



Diameter: 2.5 cm; weight: 4.1 g © Trustees of the British Museum

The National Museum of China also has a *kaiyuan tongbao* that is slightly smaller. It has a diameter of 2.3 cm, and it was excavated from Turpan 吐魯番 in the Xinjiang Uighur autonomous region. According to the museum, it was excavated from a tomb, and a Persian coin was buried with it. Its excavation reveals that Qara-hoja (Gaochang 高昌), an oasis town near Turpan, played an important role in business transactions between the east and the west.⁵²



Diameter: 2.3 cm; weight: unspecified

All the above were likely cast in the early period (621–718), judging by David Hartill's criteria for differentiation. The *jing* 井 component of *kai* 開 (inaugural) does not touch the hole. The head of *tong* 通 (transactions) is small. The top stroke of *yuan* 元 (era) is short. The two strokes in the middle of *bei* 貝 in *bao* 寶 (treasure) do not

⁵² The photos and figures were obtained from the official website of the National Museum of China, accessed 22 August 2016: <http://www.chnmuseum.cn/tabid/212/Default.aspx?AntiqueLanguageID=240/>.

touch the verticals.⁵³ Added to the criteria is the back, usually plain for those cast before the An Lushan rebellion, as Peng notes.⁵⁴

According to Hartill, the prescribed coinage alloy was 83% copper, 15% lead, and 2% tin.⁵⁵ The proportion was likely based on the data provided for Xuanzong's reign. In the *Xin Tang shu*, it was noted that there were ninety-nine foundries for coinage at the time. Each foundry produced 3,300 strings of coins per year (a string was a thousand coins strung together), using 21,200 catties of copper, 3,700 catties of solder, and 500 catties of tin.⁵⁶ To modify Hartill's formula, 15% was actually for solder, not pure lead.⁵⁷

However, the exact size and weight of excavated coins differ. A metallurgical analysis of Chinese coins at the British Museum revealed that there was a lack of consistency in the copper content of the leaded bronze alloy found in *kaiyuan tongbao* used during the Tang period. The copper content ranged from 67% to 94%.⁵⁸ An earlier analysis done by Dai Zhiqiang 戴志強 and Zhou Weirong had an even lower range of 60–75%, with lead under 30% and tin 4–9%.⁵⁹ Moreover, quite a few of the excavated coins are magnetic with a relatively high iron content,⁶⁰ showing that coinage technology was still developing, although the alloy composition was already more stable than in the Han dynasty.⁶¹

The exact proportion of metals used was also subject to regional and time differences and changes in state policy. According to Xiao Yunying 肖蘊英, the exact

⁵³ See David Hartill, *Cast Chinese Coins* (Bloomington, IN: Trafford Publishing, 2005), p. 105.

⁵⁴ Peng argued that most government-cast coins were plain on the back. He noted that both *Qianfeng quanbao* coins and the Japanese coins that were modelled on *kaiyuan tongbao* coins cast in early Tang were plain on the back. Moreover, a type of silver *kaiyuan tongbao*, likely cast during the high Tang, was also plain on the back. Some coins with gold plating had a crescent moon on the back, but this was likely added at a later date. See Peng, "Tangdai de huobi," chap. 4 in *Zhongguo huobi shi*, p. 218.

⁵⁵ See Hartill, *Cast Chinese Coins*, p. 103.

⁵⁶ See *Xin Tang shu*, *juan* 54, p. 1386.

⁵⁷ Dai Zhiqiang and Zhou Weirong note that solder is an alloy of lead and tin. See Dai and Zhou, "Zhongguo lidai tongzhubi hejin chengfen tantao," p. 63.

⁵⁸ See Helen Wang et al., eds., *Metallurgical Analysis of Chinese Coins at the British Museum* (London: British Museum, 2005), p. 2.

⁵⁹ See Dai and Zhou, "Zhongguo lidai tongzhubi hejin chengfen tantao," p. 63.

⁶⁰ See Zhou and Fan, "Tangdai 'cixing qian' yantao," pp. 32–36.

⁶¹ Casting was done at the mining sites during the Han dynasty. The copper content ranged from 60% to over 90%, and the variations in the proportion of lead and tin were even larger, with ranges of 0.1–38% and 0–18% respectively. See Dai and Zhou, "Zhongguo lidai tongzhubi hejin chengfen tantao," p. 61.

percentage varied during the dynasty. When the Tang was in financial straits, the percentage of copper typically fell.⁶² This is understandable, as the court could then no longer afford to cast full-bodied coins. Economic decline was often accompanied by political instability, which also weakened the court's control over its territories.

The inscription, *kaiyuan tongbao*, read from top to bottom, right to left, was also designed for aesthetic value. The characters were based on Ouyang Xun's 歐陽詢 (557–641) calligraphy in the Eastern Han *bafen* 八分 style, which included two styles: small seal script and clerical script.⁶³ Ouyang's calligraphy was greatly sought after even during Tang times. In fact, the Tang founded the tradition of having coin inscriptions based on the writing of fine calligraphers.⁶⁴

For *kaiyuan tongbao* coins cast after the An Lushan rebellion, there are often crescent moons, stars, sun, clouds, and even birds on the back. These signs are generally believed to have auspicious meanings, except those of crescent moons and stars, whose significance is frequently debated.⁶⁵ Below is a *kaiyuan tongbao* preserved in the British Museum that bears a crescent shape on the back.⁶⁶

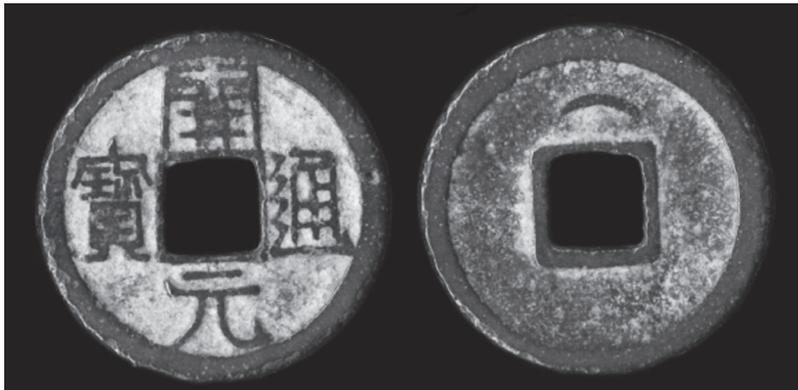
⁶² See Xiao Yunying, "Tangdai qianbi de jinshu zufen ji zhuzao" 唐代錢幣的金屬組分及鑄造, *Xi'an jinrong* 西安金融, 2005, no. 5, pp. 78–79.

⁶³ It should be noted that the *Jiu Tang shu* does not mention small seal script, but the *Xin Tang shu* does.

⁶⁴ For a brief survey, see "Woguo huobi shang de mingjia shufa" 我國貨幣上的名家書法, *Caihui tongxun* 財會通訊, 1992, no. 9, p. 5.

⁶⁵ There are four major arguments concerning the signs of moon and stars. Some say that the sign of a crescent moon was the shape of a fingernail, possibly that of Empress Wende 文德, Empress Taimu 太穆, or Consort Yang Yuhuan 楊玉環, commonly known as Yang Guifei 楊貴妃. (Academics have refuted this supposition, but it has provided much spice for storytelling, including the recent television show *The Biography of Wu Zetian*.) Some say the crescent moon symbolizes progression and success. Others argue that the Turks and the Sarbi revered the sun and the moon. Since the Tang royal members were of Sarbi (Xianbei 鮮卑) origin, and the early Tang rulers were subject to the power of the Turks, the signs of the sun and the moon were thus included in coinage. Lastly, some believe that the signs simply indicated the origin of the coinage, to make its production easily traceable. For details, see Li Rusen 李如森, *Zhongguo gudai zhubi* 中國古代鑄幣 (Changchun: Jilin daxue chubanshe, 1998), pp. 203–4.

⁶⁶ The photos can also be found on the official website of the British Museum, accessed 22 August 2016: http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=3626375&partId=1&searchText=Tang+coins&page=3.



Diameter: 2.4 cm; weight: 3.32 g © Trustees of the British Museum

The inscription shows that it was cast in the late period (732–907). It has a long, narrow head for *tong*, the *jing* component of *kai* touches the hole, and the top stroke for *yuan* is longer. It does not have distinct vertical parallel lines in the *er* 尔 component of *bao*, which is a major difference that marks it out from coins cast in the middle period (718–732).⁶⁷

The excavated coins reveal that there were many versions of the *kaiyuan tongbao* coins. The ones cast in the earlier periods were often of better quality. The quality of coins was thus an important indicator of the economic power of the court.

Part IV: Government Coinage in Action Even at a Loss

The Tang court was aware of the power of coinage in governance; private casting was strictly forbidden. The provinces that produced coins during the early Tang were Luozhou 洛州 (in modern Henan), Bingzhou 并州 (in modern Shanxi), Youzhou 幽州 (southwest of modern Beijing city), and Yizhou 益州 (in modern Sichuan). The Princes of Qin 秦 and Qi 齊, Li Shimin 李世民 (later reigned as Taizong 太宗, r. 626–649) and Li Yuanji 李元吉 (603–626), respectively, each received three foundries for coinage, whereas Pei Ji 裴寂 (573–632), Right Vice Director 右僕射 of the Department of State Affairs, received one.⁶⁸ Counterfeiting was punishable by death, and the offender's family would be enslaved. In 622, Guizhou 桂州 (in modern Guangxi) also began production.

⁶⁷ For the criteria of differentiation, see Hartill, *Cast Chinese Coins*, p. 105.

⁶⁸ As Taizong had been appointed Director of the Department of State Affairs before he ascended the throne, the position was suppressed afterwards in deference to the emperor. Therefore, the Vice Directors were in fact joint heads of the department. See Charles O. Hucker, *A Dictionary of Official Titles in Imperial China* (Stanford, CA: Stanford University Press, 1985), p. 395.

In the twenty-sixth year of Kaiyuan (738), foundries were first established in Xuanzhou and Runzhou 潤州 (in modern Jiangsu). During the Kaiyuan era, there were a total of ninety-nine foundries: thirty in Jiangzhou 絳州 (in modern Shanxi), ten in Yangzhou 揚州 (in modern Jiangsu), Runzhou, Xuanzhou, E'zhou 鄂州 (in modern Hubei) and Yuzhou 蔚州 (in modern Shanxi), five in Yizhou, Dengzhou 鄧州 (in modern Henan) and Chenzhou 郴州 (in modern Hunan), three in Yangzhou 洋州 (in modern Shaanxi), and one in Dingzhou 定州 (in modern Hebei).⁶⁹

In the fourth year of Dali (769), Diwu Qi 第五琦 (729–799), then Coinage Commissioner of Guannei 關內道鑄錢使 and Vice Director of the Ministry of Revenue 戶部侍郎, asked to establish five foundries for coinage in Fenyang 汾陽 and Tongyuan 銅原 of Jiangzhou, which Daizong approved.

In the third year of Yuanhe (808), Li Xun 李巽 (739/747–809), the Salt and Iron Commissioner, reported that the ancient copper mines of Pingyang 平陽, Maji 馬跡, and Qumu 曲木 had been rediscovered between Pingyang and Gaoting 高亭 in Chenzhou. There were over 280 pits with copper and tin in them. As a result, two foundries were established in the former Guiyang 桂陽 (in modern Hunan) mining district. It was estimated that about 20,000 coins a day could be made there.⁷⁰

Since the coins symbolized the power of the court, which was able to cast high-quality coinage and earn a reputation for issuing sound legal tender, the court was willing to maintain the production of good coinage even in the face of financial losses. One prominent example of this was the coinage in the Huai and Yangtze River valleys. Production in these areas was so inefficient that the cost of coinage plus transportation was twice the nominal value of the coins. When Dezong 德宗 (r. 779–805) ascended the throne, Han Hui 韓洄 (732–794), Vice Director of the Ministry of Revenue, pointed out that the seven foundries there produced 45,000 strings of coins per year. Each thousand coins cost two thousand to make and transport to the capital. He then proposed to revive coinage in Luoyuan 洛源 (in modern Shaanxi), since mines at Hongya 紅崖 of Shangzhou 商州 (in modern Shaanxi) had an ample supply of copper. With ten foundries at work, they could produce 72,000 strings of coins

⁶⁹ The *Xin Tang shu* does not mention Dengzhou. It is added here because both *Tongdian* and *Tongzhi* 通志 include Dengzhou, without which the numbers also do not add up to 99. See “Shi huo zhi,” in *Xin Tang shu*, *juan* 54, pp. 1386, 1392.

⁷⁰ The *Xin Tang shu* notes that 200,000 coins could be produced each day. This is likely a textual error, for the line that immediately follows reads, “The overall production of the empire was 135,000 strings per year” 天下歲鑄錢十三萬五千緡. If the figure were accurate, it would imply that these two places produced over half of the yearly coinage. See “Shi huo zhi,” in *Xin Tang shu*, *juan* 54, p. 1389. The figure in the main text references the *Jiu Tang shu*, which notes that each day 20 strings could be produced, with an estimated total of 7,000 strings per year. See “Shi huo zhi,” in *Jiu Tang shu*, *juan* 48, p. 2101.

each year; each thousand coins would cost only nine hundred to cast and transport, so the court could make a profit of ten percent. It was then that the seven foundries in the Huai and Yangtze River valleys were closed.⁷¹

From this piece of information, it can be seen that issuing full-bodied coins yielded little or no financial gain; sometimes it even incurred losses. Nonetheless, the sovereign was willing to make sacrifices in exchange for the establishment of a firm monetary system. It was not until Han Hui pointed out an alternative that the government began to save on production and transportation costs. In his book, Twitchett affirms that the weight of officially cast coins of *kaiyuan tongbao* tended to increase, at least until the An Lushan rebellion.⁷²

Part V: Crying up the Coinage to Fund State Expenses

The issuance of *kaiyuan tongbao*, even if it caused financial loss, was essential in standardizing coinage and establishing court authority over the monetary market, especially during the inauguration of the Tang ruling house. When the Tang house had stabilized its rule, later emperors began to make use of this hard-earned authority as a way to fund state expenses. This significant change of policy was often triggered by military activities, which required financial support, although the prevalence of counterfeit coins also played a role.

The first attempt to cry up the coinage was the casting of *Qianfeng quanbao* in the first year of Qianfeng 乾封 (666) under Gaozong's reign. The coin was issued four months after Gaozong had successfully conducted the imperial ceremony of sacrifice to the heaven and earth at Mount Tai in the same year.⁷³ The trigger for the policy was likely the increase in military expenses caused by the expedition against Goryeo that began in the same month.⁷⁴ *Qianfeng quanbao* were debased in comparison to *kaiyuan tongbao*, and readily recognizable by their lighter weight and higher-denominated value.

According to the official histories, *Qianfeng quanbao* were larger than *kaiyuan tongbao*, with a diameter of one *cun* 寸, weighing two *zhu* 銖 and six *fen* 分. Since one *fen* equals one-hundredth of a tael, they were supposed to be lighter than *kaiyuan tongbao*. However, there are excavated coins that are actually heavier. Their nominal value was ten times the *kaiyuan tongbao*. Below are pictures of an excavated coin

⁷¹ Details of Han Hui's memorial are recorded only in the *Jiu Tang shu*, not in the *Xin Tang shu*. See "Shi huo zhi," in *Jiu Tang shu*, *juan* 48, p. 2101.

⁷² See Twitchett, *Financial Administration under the T'ang Dynasty*, p. 69.

⁷³ See *Zizhi tongjian*, *juan* 201, p. 6347.

⁷⁴ See Wen Yuanyuan 文媛媛, "Tang qianqi 'sizhuqian' wenti shulun" 唐前期「私鑄錢」問題述論, *Meili Zhongguo* 魅力中國, 2010, no. 17, pp. 306–7.

from the National Museum of China. According to the museum, the diameter of such coins normally ranges from 2.5 to 2.8 cm; the weight ranges from 3.7 to 4.9 g. The one below has a diameter of 2.6 cm, and it weighs 4.2 g.⁷⁵



Diameter: 2.6 cm; weight: 4.2 g

The Shanghai Museum has a *Qianfeng quanbao* with gold plating.⁷⁶



Diameter: 2.588 cm; weight: unspecified

This coin has holes on four sides. Peng notes that *kaiyuan tongbao* coins with gold plating and four holes were used to make shuttlecocks for palace ladies. He even speculates that this was the type of coin used in the coin-showering game among palace ladies during Kaiyuan and Tianbao 天寶 eras (713–756); coins for this purpose were decorated with feathers.⁷⁷ Peng’s remarks may also apply to this *Qianfeng quanbao* coin. In any case, the gold plating and four holes reveal that this coin was

⁷⁵ The photos and figures were obtained from the official website of the National Museum of China, accessed 22 August 2016: <http://www.chnmuseum.cn/tabid/212/Default.aspx?AntiqueLanguageID=5703/>.

⁷⁶ The photos and figures were obtained from the official website of the Shanghai Museum, accessed 27 July 2016: <http://www.shanghaimuseum.net/museum/frontend/articles/CI00003001.html/>.

⁷⁷ See Peng, “Tangdai de huobi,” chap. 4 in *Zhongguo huobi shi*, p. 238.

not a regular coin meant for circulation, and was likely used for collecting, for commemorations, and for decorative purposes

Gaozong's original plan was to replace all the old coins with *Qianfeng quanbao* after a year.⁷⁸ It is unfortunate that the edict issued for its coinage has been lost. However, in his later edict “Rengyong kaiyuan tongbao qian zhao” 仍用開元通寶錢詔 (To Revert to the Use of *Kaiyuan Tongbao* Coins), which he issued to abolish it in 667, he clearly stated that his earlier policy was “to abolish the old and create the new” 廢舊造新; he had perceived the coinage of the *Qianfeng quanbao* as a way to ease the counterfeiting problem that had been plaguing the court. Seeing the damaging effects the new coins had on the economy, he placed the blame on himself for not following the standard set by Gaozu and maintained by Taizong. He thus “returned to the use of *kaiyuan tongbao*, just as before” 其開元通寶，宜依舊施行。⁷⁹ Due to the short-lived issuance of the *Qianfeng quanbao*, some have considered that it was conceived as a temporary expedient. However, it was in fact the first attempt in the Tang dynasty to cry up the coinage to ease the pressure on the demand for money in the longer run, while also allowing the court to obtain income from coinage. The nominal value of these coins, of course, was to be backed up by the central government.

Both the two Tang histories noted that a year after the issuance of *Qianfeng quanbao*, the *kaiyuan tongbao* coins had almost ceased to circulate in the market.⁸⁰ However, hyperinflation and the rampant counterfeiting that accompanied it both caused an early halt to the new coinage. First of all, the concurrent use of the new coins and the old coins in the first year almost guaranteed that the old coins would be favoured, due to their higher intrinsic value. In the monetary market, old coins would be hoarded or recast into *Qianfeng quanbao*, while the new coins pushed up the prices of goods. This was most readily seen in the prices of grain and textiles that were daily necessities. The inevitable result was an indirect encouragement to counterfeit. People forged coins not only because the potential gain was large, but also because they had no other means to maintain a living during times of severe inflation. The court was powerless to control the situation. Even the inscription on the *Qianfeng quanbao* was considered problematic. It did not conform to the standard—read in the order of top, bottom, right, and left—but was made to read clockwise from the top. This was

⁷⁸ See *Zizhi tongjian*, *juan* 201, p. 6347.

⁷⁹ See Gaozong's edict “Rengyong kaiyuan tongbao qian zhao,” in *Quan Tangwen xinbian*, *juan* 12, p. 163. See also the same edict with a different title, “Yong jiuqian zhao” 用舊錢詔, in Song Minqiu 宋敏求 (1019–1079), comp., *Tang da zhaoling ji* 唐大詔令集 (Beijing: Zhonghua shuju, 2008), *juan* 112, p. 582.

⁸⁰ See “Shi huo zhi,” in *Jiu Tang shu*, *juan* 48, p. 2095; “Shi huo zhi,” in *Xin Tang shu*, *juan* 54, p. 1384.

a careless mistake by the designer, who apparently mistook the common clockwise reading of the inscription *kaiyuan tongbao* as “kaitong yuanbao” 開通元寶 (great treasure for facilitating transactions) for the correct one.⁸¹ After a year, the court had to revert to casting *kaiyuan tongbao* coins.

Despite the fact that these coins did not circulate for long, their coinage was significant in Tang monetary history. It was a clear attempt to turn bronze coins into something like fiat money, at a time when the Tang was still in its heyday. If the court had been able to back it up with economic and political power, this method could have been used to alleviate the shortage of metal coins. Although Gaozong soon announced that *kaiyuan tongbao* was to be the standard design for Tang coins, and should not be altered, this did not deter later emperors from meddling with the coinage, especially when they were in financial straits. What the dynasty failed to accomplish in its heyday was guaranteed to be worse when state authority was in decline. The resultant loss of faith in the legal tender had a chaotic effect on the monetary market, as demonstrated by hyperinflation and rampant counterfeiting, which often required significant time and effort to redress.

This was precisely the case during Suzong’s reign, when he cried up the coinage in two subsequent years, 758 and 759. During the Qianyuan 乾元 era (758–760) when the court was fighting the An Lushan rebellion, Suzong accepted the proposal of Diwu Qi, then the Vice Censor-in-Chief 御史中丞, and repeatedly issued large, heavy coins with preposterous nominal values. Suzong made it clear that this was an attempt to meet the dynasty’s expenses. Suzong’s edict “Zhu yi dang shi qian zhao” 鑄一當十錢詔 (Casting a Coin That Is Worth Ten), also known as “Xing Qianyuan zhongbao qian chi” 行乾元重寶錢敕 (To Issue Qianyuan *Zhongbao*), issued in 758, is particularly worth mentioning. It states clearly that the court was in great need of money for military provisions, and it alludes to Bu Shi 卜式 and Sang Hongyang 桑弘

⁸¹ This clockwise reading was so common at the time that even the Japanese coins, “Wadō kaihō” 和銅開珎, followed the pattern. The National Museum of China has one “Wadō kaihō” with a diameter of 2.4 cm excavated from Shaanxi.  Accessed 22 August 2016: <http://www.chnmuseum.cn/tabid/212/Default.aspx?AntiqueLanguageID=730/>. Note that “kaihō” is an abbreviation for *kaiyuan tongbao*. The character 珎 is a simplified version of *bao*, as Guo Moruo noted. See Guo, “Chutu wenwu ersan shi,” pp. 2–3. The influence of this clockwise reading was so widespread that even to the present day, the reading of *kaitong yuanbao* 開通元寶 is still preferred by some. When Kakinuma Yōhei 柿沼陽平 refers to these coins, he chose the clockwise reading even though he also provides the standard reading. See Kakinuma, *Chūgoku kodai no kahei: Okane wo meguru hitobito to kurashi* 中国古代の貨幣：お金をめぐる人びとと暮らし (Tokyo: Yoshikawa kōbunkan, 2015), p. 8. Kakinuma focuses on the pre-Tang period. This book targets more general readers and is a sequel to his academic book, formerly published as *Chūgoku kodai kahei keizai shi kenkyū* 中国古代貨幣經濟史研究 (Tokyo: Kyūko shoin, 2011).

羊 (152–80 b.c.) and their contributions to funding court expenses.⁸² It openly admits the court's attempt to obtain a tenfold profit from casting these coins, and adds that this was being done to avoid causing more trouble to the people, apparently referring to the problem of collecting higher taxes.⁸³

The edict reveals that Suzong and the officials were fully aware that crying up the coinage was a form of indirect taxation. In modern economics, this takes the form of printing money, as the Nobel Prize winner in economics Milton Friedman observed. In fact, the court had blatantly imposed taxes on daily necessities before then, and had forced prestigious clans and merchants to lend money to the crown. Even official titles had a price.⁸⁴ Crying up the coinage was the ultimate method to withdraw cash from all who resided within the jurisdiction of the Tang court.

The new coins were officially named *Qianyuan zhongbao*. An alternate name was *Qianyuan shi dang qian* 乾元十當錢, which indicated that each coin carried a denominated value equal to ten *kaiyuan tongbao* coins. They were larger and heavier than the *kaiyuan tongbao* and had the same diameter as *Qianfeng quanbao* coins, with a diameter of one *cun*. A thousand of them weighed ten catties, which was 1.6 times the weight of a thousand *kaiyuan tongbao* coins. The tenfold increase in value was out of proportion to the slight increase in weight. According to the museum, the diameter of such coins normally ranges from 2.5 to 3.4 cm; the weight ranges from 6 to 19.8 g. Below are pictures of an excavated coin kept in the National Museum of China.⁸⁵ Note that there is a “ten” on the back:

⁸² Bu Shi accumulated his wealth by tending sheep. During the reign of Emperor Wu of Han 漢武帝 (141–87 b.c.), he offered to contribute half of his wealth to assist the emperor in defending the borders. Sang Hongyang was the son of a merchant. He assumed the post of Commandant-in-Chief of the Granaries 治粟都尉 and Chamberlain for the National Treasury 大司農 during Emperor Wu's reign. He assisted the administration in monopolizing the trade of salt, iron, and wine, while he also established a system to regulate price levels.

⁸³ See Suzong's edict “Zhu yi dang shi qian zhao,” in *Quan Tangwen xinbian*, *juan* 42, p. 538. See also the same edict with a different title, “Xing Qianyuan zhongbao qian chi,” in *Tang da zhaoling ji*, *juan* 112, p. 582.

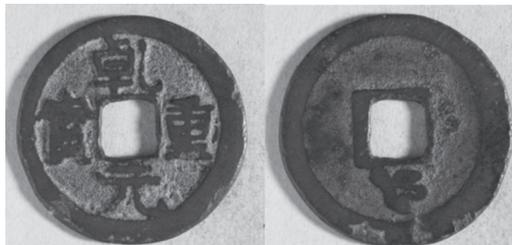
⁸⁴ When Xuanzong was residing in the Ba-Shu 巴蜀 area (in modern Sichuan), Zheng Fang 鄭昉 proposed a levy on salt and hemp to fund the government. When Suzong ascended the throne in Lingwu 靈武 (in modern Lingxia), he appointed Zheng Shuqing 鄭叔清 as Censor. One of his missions was to obtain loans from the prestigious clans and rich merchants, and to sell government titles for funds in the Jiangling 江陵 area (in modern Hubei). See *Jiu Tang shu*, *juan* 48, p. 2087.

⁸⁵ The photos and figures were obtained from the official website of the National Museum of China, accessed 27 July 2016: <http://www.chnmuseum.cn/tabid/212/Default.aspx?AntiqueLanguageID=5704/>.



Diameter: 3.2 cm; weight: 10.7 g

This one weighs 10.7 g, which is even heavier than the standard *Qianyuan zhongbao* specified in official histories. There is another preserved in the China Numismatic Museum with a bird below the hole instead of “ten” on the back:⁸⁶



Diameter: 2.9 cm; weight: 5.2 g

This one has a weight closer to what is specified in official histories. Most *Qianyuan zhongbao* excavated have a lighter weight, however. Below is one preserved in the China Numismatic Museum, which has a diameter and weight similar to *kaiyuan tongbao*. This time clouds were inscribed above the hole on the back:⁸⁷



Diameter 2.41 cm; weight: 3.5 g

⁸⁶ The photos and figures were obtained from the official website of the China Numismatic Museum, accessed 1 August 2016: <http://www.cnm.com.cn/zgqbbwg/132464/137471/index.html>.

⁸⁷ The photos and figures were obtained from the official website of the China Numismatic Museum, accessed 1 August 2016: <http://www.cnm.com.cn/zgqbbwg/132464/137480/index.html>.

These excavated coins reveal that there were various dimensions and weights of *Qianyuan zhongbao*. Some of them do not even meet the standard for the *kaiyuan tongbao*. There are two explanations for this. They could be counterfeit coins, as Peng pointed out.⁸⁸ Also, there was an issuance of small Qianyuan coins that was not recorded in official histories, as Hong Zun 洪遵 (1120–1174) noted. Hong referred to Jin Guangxi 金光襲, who had said such coins were cast in the second year of the Qianyuan era. Although unsure of Jin's source, he presumes that these coins were indeed cast by Suzong. A sample coin that he provided had the same diameter as *kaiyuan tongbao*, but was heavier, with a weight of three *zhu* and three *can*. He noted that during the Southern Song dynasty, many such coins were still preserved.⁸⁹

Since the issuance of *Qianyuan zhongbao* was basically an indirect taxation imposed on all, the increase in state income was readily seen. Its effect was noted in Suzong's edict "Xing qingzhong qian chi" 行輕重錢敕 (To Cry up the Coinage), which is also known as "Xing chonglun qian chi" 行重輪錢敕 (To Issue Double-Rimmed Coins). Suzong then had coins cast with an even more inflated value. These were *chonglun Qianyuan* 重輪乾元 coins (*Qianyuan* coins with double rims), proposed by Diwu Qi, who was made chief minister in 759. Suzong's edict reveals that imperial coinage was entrusted to the foundries in Jiangzhou. The long-due salaries of officials were to be paid with these new coins.⁹⁰ These coins were even larger and heavier, their value even more inflated. They were still inscribed with *Qianyuan zhongbao*, but they had a double outer rim on the back, so they were also known as *chongleng* 重稜 (double-rim) coins.⁹¹ To differentiate them from the other Qianyuan coins, *chongleng* is used henceforth, and *Qianyuan shi dang qian* is used when referring to the first Qianyuan coins cast. Each *chongleng* coin had a diameter of one *cun*, two *fen*, and

⁸⁸ See Peng, "Tangdai de huobi," chap. 4 in *Zhongguo huobi shi*, p. 215.

⁸⁹ See Hong Zun, *Quan zhi* 泉志 (Beijing: Zhonghua shuju, 1985), *juan* 3, p. 18.

⁹⁰ See Suzong's edict "Xing qingzhong qian chi," in *Quan Tangwen xinbian*, *juan* 44, p. 552. See also the same edict with a different title, "Xing chonglun qian chi," in *Tang da zhaoling ji*, *juan* 112, pp. 582–83.

⁹¹ David Hartill noted that *chonglun* coins have a double rim on the reverse, but he named these coins "heavy wheel cash." See Hartill, *Cast Chinese Coins*, p. 109. Although 重 can also mean heavy, read as *zhong* in this sense, I understand it as *chong* (double). This is because the design of the coins has a double rim, and *chonglun* could also signify the sovereign power. *Chonglun* can refer to the vehicle of the emperor, which had double wheels, or to the aura of the sun and the moon, which can be used as a metaphor for the emperor. Both interpretations imply the authority of the ruler, which is fitting since the success of the coinage had to rely mostly on people's faith in the sovereign.

weighed twenty catties per thousand.⁹² Since one catty equalled sixteen taels, each coin weighed 0.32 taels. However, it was valued at fifty *kaiyuan tongbao*, which weighed five taels total. For the same nominal value, the metal content was only 6.4% of the original. Excavated *Qianyuan zhongbao* coins vary in weight, size, and design. According to the National Museum of China, the diameter of such coins normally ranges from 3.1 to 3.65 cm; the weight ranges from 9.8 to 26.5 g. Below are pictures of an excavated coin kept in the National Museum of China:⁹³



Diameter: 3.5 cm; weight: 20 g

Some *chongheng* coins also have symbols on the back. The China Numismatic Museum has one with a crescent moon on the back.⁹⁴



Diameter 3.44 cm; weight 14.3 g

⁹² Both *Jiu Tang shu* and Suzong's edict "Xing qingzhong qian chi" note that one string weighed twenty catties. See "Shi huo zhi," in *Jiu Tang shu*, *juan* 48, p. 2100. The *Xin Tang shu* notes that it weighed twelve, which is probably a textual error. See "Shi huo zhi," in *Xin Tang shu*, *juan* 54, p. 1387.

⁹³ The photos and figures were obtained from the official website of the National Museum of China, accessed 27 July 2016: <http://www.chnmuseum.cn/tabid/212/Default.aspx?AntiqueLanguageID=5705/>.

⁹⁴ The photos and figures were obtained from the official website of the China Numismatic Museum, accessed 1 August 2016: <http://www.cnm.com.cn/zgqbbwg/132464/137462/index.html/>.

The other is gold-plated.⁹⁵



Diameter 3.58 cm; weight 12.6 g

Both types of *Qianyuan tongbao* coins were in circulation with the *kaiyuan tongbao* coins. In less than two years, the coins' denominated value had jumped from ten times to fifty times the value of *kaiyuan tongbao*, without much increase in weight. The quick escalation in denominated value in relation to weight seriously undermined the trustworthiness of the legal tender. However, the An Lushan rebellion was still ongoing, so the court had to risk the devastating effects of the policy in exchange for state income to finance the military; the dynasty faced immediate peril.

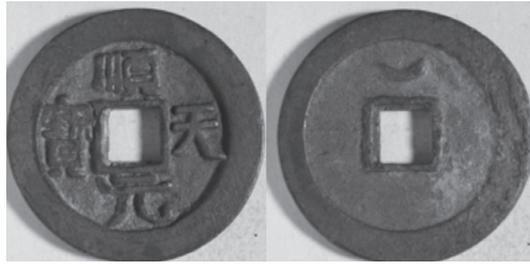
In fact, Suzong was not the only one who extracted money from his people by crying up the coinage. The major rebel, Shi Siming 史思明 (d. 761), went even further when he conquered Luoyang in 760, two years after the first issuance of *Qianyuan* coins. He issued large, heavy coins that carried a denominated value a hundred times that of *kaiyuan tongbao* coins. They were first called *Deyi yuanbao* 得一元寶 (treasure of heaven), and later renamed *Shuntian yuanbao* 順天元寶 (treasure that complies with heaven), for *deshi* could also be interpreted as “only one,” which was inauspicious, as it could mean having only one dynastic era. These coins had a diameter of one *cun* and four *fen*, only slightly larger than the *chongleng* coins.⁹⁶ Peng noted that these coins weighed about 21 g each.⁹⁷ Below is a *Shuntian yuanbao* coin kept at the China Numismatic Museum:⁹⁸

⁹⁵ The photos and figures were obtained from the official website of the China Numismatic Museum: accessed 1 August 2016, <http://www.cnm.com.cn/zgqbbwg/132464/137453/index.html/>.

⁹⁶ See *Xin Tang shu*, *juan* 54, p. 1387.

⁹⁷ See Peng, “Tangdai de huobi,” chap. 4 in *Zhongguo huobi shi*, p. 216.

⁹⁸ The photos and figures were obtained from the official website of the China Numismatic Museum, accessed 28 July 2016: <http://www.cnm.com.cn/zgqbbwg/132464/137444/index.html/>.



Diameter: 3.71 cm; weight: 22.4 g

The fact that *Shuntian yuanbao* had an even more inflated value than the two types of *Qianyuan* coins probably made the Tang court the lesser evil. At the time, inflation was even worse in the areas controlled by the rebels.⁹⁹ Nonetheless, the combined effect of the lack of resources during wartime and the issuance of these large coins inevitably caused hyperinflation; the authority of the legal tender collapsed. Before the *Qianyuan zhongbao* coins had been cast, it was said that the purchasing power of bronze coins was high, thus leaving space for more production to boost the economy.¹⁰⁰ When *chonglun* coins were cast, however, the escalation in nominal value was beyond what the market could bear. While Diwu Qi was intelligent enough to know that issuing such coins would augment state reserves, he miscalculated the capacity of the market.

Unlike modern society, where the supply of produce can be boosted by using scientific methods, in medieval China the amount of food was greatly subject to environmental and political factors. Natural disasters damaged agricultural products, and political turmoil prevented people from farming. The supply of farm produce could thus be considered “sticky”: its supply could not respond as quickly as other goods to a change in price level; its demand also remained relatively stable. Grain prices, for example, immediately showed the effect of these inflated coins. In 760, there was a famine. The value of each peck of grain skyrocketed to 7,000 coins. Many people were left to starve and die. Cannibalism even occurred in some areas.¹⁰¹

Since the nominal value of *Qianyuan* coins was far too high in comparison to its weight, it became very profitable to cast coins. This was particularly tempting at a time when commoners had no means to provide for themselves because of hyperinflation. As a result, there was serious coin forgery even within Chang’an city, right under the nose of the emperor. Copper items, including bells, religious images, and smaller coins, were melted down to make poor-quality *chongleng* coins. To suppress counterfeiting and set an example, Zheng Shuqing 鄭叔清, Administrator of the

⁹⁹ See *Zizhi tongjian*, *juan* 221, p. 7093.

¹⁰⁰ See “Diwu Qi zhuan,” in *Jiu Tang shu*, *juan* 123, p. 3517.

¹⁰¹ Cannibalism was mentioned in *Zizhi tongjian*, *juan* 221, p. 7092.

Metropolitan Area 京兆尹, had over eight hundred offenders beaten to death within a few months.

In order to appease the populace and likely also the traditional officials, Suzong had Diwu Qi demoted in 759. Aware of the devastating effects of the *Qianyuan* coins, in 760 he issued the edict “Ling baiguan yi ba xinqian zhao” 令百官議罷新錢詔 (To Discuss the Abolishment of New Coins), in which he summoned all officials above the ninth rank for open discussions on the practicality of abandoning these new coins while also maintaining enough income for the court.¹⁰² In the same year, Suzong issued “Chongleng qian jianjia xingyong chi” 重稜錢減價行用敕 (To Reduce the Nominal Value of *Chongleng* Coins). He reduced the nominal value of *chongleng* coins to that of thirty *kaiyuan tongbao* coins, and increased that of *kaiyuan tongbao* coins to ten times their original value, making the latter equivalent to *Qianyuan shi dang qian*.¹⁰³ This enforced change in the conversion rate was in order to eliminate the gap between the large coins and the standard coins. Since *Qianyuan shi dang qian* were actually heavier than *kaiyuan tongbao* coins, they ended up having a higher intrinsic value than the latter. When list prices were much higher than the actual prices, *Qianyuan shi dang qian* would be used for transactions; they were known as *xuqian* 虛錢 (fiat money).¹⁰⁴ Li Jinxiu 李錦繡 notes that, as the large coins eventually disappeared from the market after Daizong equalized the denominated value of all coins, fiat money no longer existed in the Tang dynasty. However, the term “*xuqian*” still frequently occurred in historical records concerning the late Tang. By then, *xuqian* no longer referred to fiat money, but to the nominal estimated exchange rate of silk tabbies, as determined by the central government.¹⁰⁵

¹⁰² See Suzong’s edict “Ling baiguan yi ba xinqian zhao,” in *Tang da zhaoling ji*, juan 112, p. 583.

¹⁰³ See Suzong’s edict “Chongleng qian jianjia xingyong chi,” in *Quan Tangwen xinbian*, juan 44, p. 552.

¹⁰⁴ See “Shi huo zhi,” in *Xin Tang shu*, juan 54, p. 1387. Wei Daoming disagrees with the common understanding that *xuqian* refers to fiat money and that *shiqian* 實錢 refers to full-bodied coins. He notes that *xuqian* and *shiqian* actually referred to two different ways of calculation with full-bodied coins. When their nominal value was raised in market transactions to combat hyperinflation caused by bad coins, they would be known as *xuqian*. *Shiqian* would simply refer to a coin’s denominated value. He adds that the terms *xuqian* and *shiqian*, as mentioned in the *Xin Tang shu*, actually refer to the official recognition and approval of the practice of treating coins with different intrinsic values differently. See Wei Daoming, “Lüelun Tangchao de xuqian he shiqian” 略論唐朝的虛錢和實錢, *Qinghai shifan daxue xuebao*, 1992, no. 2, pp. 54–57, 79.

¹⁰⁵ See Li Jinxiu, “Tang houqi de xuqian, shiqian wenti” 唐後期的虛錢、實錢問題, *Beijing daxue xuebao* 北京大學學報, 1989, no. 2, pp. 11–23.

When Daizong ascended the throne, he readjusted the value of *Qianyuan shi dang qian* to that of two *kaiyuan tongbao* coins, and of *chongleng* coins to that of three *kaiyuan tongbao* coins. After three days, he readjusted the value a second time, making the denominated value of all coins equal. Since the *Qianyuan* coins were larger and heavier, it was said that they were melted down to make copper articles and thus eventually disappeared from the market. The effects of crying up the coinage finally subsided. However, the Tang court was no longer as powerful as before, either politically or economically. After the An Lushan rebellion, it began to suffer from the rising power of provincial governors and eunuchs, while the Uighurs and the Turfans also posed a serious threat to its borders. The frequent warfare, abundant gifts given to the Uighurs for their support in recovering the two capitals during the An Lushan rebellion, and the loss of tax revenue to the semi-independent military governors all contributed to this decline in state authority, which was readily seen in the coinage.

Part VI: Decline in State Authority and in Coin Quality

In the mid- and late Tang, the court occasionally issued coins named after the current reign-period, an innovation that became standard practice throughout the rest of imperial history. This innovation reveals a dilemma that the court faced. On one hand, it was no longer able to afford the high cost of casting full-bodied coins; on the other, it could not risk disrupting the monetary system with debased coins or another round of crying up the coinage.

These reign-period coins include *Dali yuanbao*, *Jianzhong tongbao*, *Huichang kaiyuan*, and *Xiantong xuanbao*. The official histories provide us with little information on these coins, except for *Huichang kaiyuan*. Peng suspected that *Dali yuanbao* and *Jianzhong tongbao* were privately cast. This was because the coin inscription ran clockwise, not standard for coins centrally cast. Although *Qianfeng quanbao* coins also had inscriptions cast clockwise, that had been perceived as a mistake, and the coins had been abolished within a year. Peng speculated that *Dali yuanbao* and *Jianzhong tongbao* were privately cast to meet the demand for tax payments in coins. However, he also had reservations, because private casting was unprofitable at the time, and it was also rare to cast new coins that were different from the legal tender.¹⁰⁶ I am inclined to perceive them as coins that were centrally cast to meet the financial need that the court faced after the An Lushan rebellion. If they had been privately cast, it would be inexplicable for the counterfeiters to have cast new coins, when they could have just used *kaiyuan tongbao* to create a mould for reproduction. Casting coins with a different coin inscription was costly and would have

¹⁰⁶ See Peng, “Tangdai de huobi,” chap. 4 in *Zhongguo huobi shi*, p. 216.

raised unnecessary suspicion. It would also have been unlikely for people to submit counterfeit coins as tax payments, which obviously would have been a challenge to the dynasty's tolerance; nor for the court to accept coins that were so poorly made. Below is a *Dali yuanbao* preserved in the British Museum. It exhibits poor craftsmanship and inferior alloy composition:¹⁰⁷



Diameter: 2.35 cm; weight: 3.27 g © Trustees of the British Museum

Below is a *Jianzhong tongbao* preserved in the British Museum, which is just as bad. The coin was cast in Xinjiang and found at a site west of Kucha.¹⁰⁸



Diameter: unspecified; weight: unspecified © Trustees of the British Museum

Huichang kaiyuan, cast in 845 under Wuzong's reign, was the type of coin particularly mentioned in official histories. They were cast using the scrap metal from copper bells, gongs, incense burners, and statues. Li Shen 李紳 (772–846), the Military Governor of Yangzhou 揚州, presented a sample coin with the character

¹⁰⁷ The photos can also be found on the official website of the British Museum, accessed 22 August 2016: http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?assetId=31120001&objectId=931140&partId=1/.

¹⁰⁸ The photos can also be found on the official website of the British Museum, accessed 22 August 2016: http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?assetId=809223001&objectId=3282793&partId=1/.

chang 昌 cast on the back to indicate the era. Upon his example, these coins were designed to bear a Chinese character on the back. Wang Yichen notes that this character was either the name of the foundry or the economic and political centre of the respective circuit in which they were made.¹⁰⁹ Below are photos of a *Huichang kaiyuan* that bears the name of the foundry where it was made.¹¹⁰



Diameter: unspecified; weight: 3.42 g © Trustees of the British Museum

The *Huichang kaiyuan* coins were inferior to the *kaiyuan tongbao*. Since they were made from the scrap metal of Buddhist artefacts, quality control was unsatisfactory. When they were cast, Wuzong issued the edict “Tingyong jiuqian chi” 停用舊錢敕 (To Terminate the Use of Former Coins), in which he ordered the use of new coins and halted the use of old coins for about three years. Using old coins during this period would be viewed as committing a crime similar to using coins made of tin and lead. Wuzong stated that the purpose of the new regulation was to punish those who hoarded coins.¹¹¹ However, within a year, Wuzong issued the edict “Liubu xianqian chi” 流布見錢敕 (To Circulate Coins), which allowed the circulation of old coins.¹¹² The reason given was the wide acceptance of the new coins, so that old coins could now be circulated as well. However, the *Jiu Tang shu* disclosed that the original policy could not be implemented.¹¹³ Wuzong passed away on the twenty-third of the third month of the sixth year of Huichang (846).¹¹⁴ It was said that when Xuānzong 宣宗 (r. 846–859), Wuzong’s younger uncle, ascended the throne, he abolished Wuzong’s policy, and *Huichang yuanbao* were melted to make Buddhist images.¹¹⁵

¹⁰⁹ See Wang Yichen, “Zhong-wan Tang Hebei sanzhen jiaoyi de meijie,” pp. 27–30.

¹¹⁰ The photos can also be found on the official website of the British Museum, accessed 22 August 2016: http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=931073&partId=1&searchText=Tang+coins&page=1/.

¹¹¹ See Wuzong’s edict “Tingyong jiuqian chi,” in *Quan Tangwen xinbian*, *juan* 77, p. 941.

¹¹² See Wuzong’s edict “Liubu xianqian chi,” in *Quan Tangwen xinbian*, *juan* 77, p. 943.

¹¹³ See *Jiu Tang shu*, *juan* 48, p. 2106.

¹¹⁴ *Ibid.*, *juan* 18a, p. 610.

¹¹⁵ See “Shi huo zhi,” in *Xin Tang shu*, *juan* 54, p. 1391.

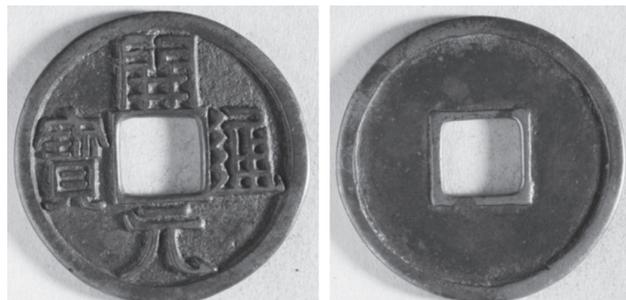
Xiantong xuanbao coins were said to have been cast in the eleventh year of Xiantong 咸通 (870) during Yizong's 懿宗 reign (859–873) in the Guiyang Inspectorate, but were soon abolished. They are not recorded in the official histories, but are noted in the numismatic scholar Hong Zun's *Quan zhi* 泉志 (Record of Coins), which quotes from the *Jiu pu* 舊譜 (Old Catalogue).¹¹⁶ They are very rare in recent collections. The National Museum of China has preserved one.¹¹⁷



Diameter: 2.3 cm; weight: 3 g

The inscription is basically illegible. In terms of design, there are outer and inner rims on the front, but not on the back. From the sample above, it appears to be a new type of coin, significantly different from *kaiyuan tongbao*. Since there is no historical record of these coins, we know little of them.

Another type of coin that poses many questions is the large *kaiyuan tongbao* coin. It is unclear when and by whom it was cast. The China Numismatic Museum in Beijing has preserved one.¹¹⁸



Diameter: 4.31 cm; weight: 17.7 g

¹¹⁶ See Hong Zun, *Quan zhi*, *juan* 3, pp. 20–21.

¹¹⁷ The photos and figures were obtained from the official website of the National Museum of China, accessed 22 August 2016: <http://www.chnmuseum.cn/tabid/212/Default.aspx?AntiqueLanguageID=5709/>.

¹¹⁸ The photos and figures were obtained from the official website of the National Museum of China, accessed 22 August 2016: <http://www.cnm.com.cn/zgqbbwg/132464/137426/index.html/>.

The coin's inscription suggests that it was likely cast at a later date. Probably cast for special occasions, it cannot be representative of the coins in circulation during Tang times. Hong Zun suggested that it was cast in the fourth year of Jianzhong 建中 (783), when Zhao Zan 趙贊 (*fl.* 780–783), who was in charge of the Bureau of General Accounts, proposed to cast large *kaiyuan tongbao* made of copper-nickel alloy for ten times their nominal value in order to fund the military expedition against Li Xilie 李希烈 (d. 786), the rebellious military governor of Huaixi 淮西 (in modern Henan). In his discussion of this type of large *kaiyuan tongbao* coin, Peng was doubtful about Hong's suggestion. He noted that the excavated coins might have been trial products, but they were not made of copper-nickel alloy and were too large to be the type cast by Zhao Zan. They were similar to those cast in the Southern Tang dynasty.¹¹⁹

These reign-year coins were inferior to the standard *kaiyuan tongbao* coins in craftsmanship and copper content. They were a clear reflection of the decline in sovereign power.

Part VII: To Stay in Control: Anti-Counterfeiting Policies and Their Effectiveness

The issuance of coins reflected the needs of the Tang court in different eras. When the court was at its pinnacle, coins were made to maintain the authority of the state. When the court was in financial straits, however, coinage became more important as a way to secure state income. Regardless of the kind of coins that were issued, the aim of the court was to control the monetary market. However, the court continued to face market forces, which manifested themselves in the form of counterfeiting whenever it was profitable, and the melting of coins when the copper in them was more valuable.

There has been much discussion of the reasons that counterfeiting was so difficult to control. The shortage of legal coins is generally held responsible.¹²⁰ Without enough coins to facilitate business transactions, there was a higher demand for coins, which made casting them illegally more profitable. However, it should be noted that even when there were enough coins for circulation, conditions did not deter counterfeiters from casting debased coins, as long as they could still reap a profit. This is proven by the following case.

In 679 of the Yifeng 儀鳳 era (676–679), the court tried to stop people from counterfeiting by confiscating any accumulation of copper, tin, and solder over a

¹¹⁹ See Peng, "Tangdai de huobi," chap. 4 in *Zhongguo huobi shi*, p. 216.

¹²⁰ See Xiao Qing 蕭清, *Zhongguo gudai huobi shi* 中國古代貨幣史 (Beijing: Renmin chubanshe, 1984), p. 184.

hundred catties.¹²¹ To increase the market share of legal coins, the government simply sold the brown rice and millet from the imperial granaries in Loyang. It then recast those non-standard coins they obtained from the sale. Despite the increase in the supply of grain and millet, the price went up. The excessive quantity of coins was believed to be the culprit. While legal coinage might have contributed to it, the major reason, however, was likely a rise in counterfeiting. Since the court was collecting bad coins for recasting, commoners could pass off these coins to the government, and this indirectly encouraged their circulation. As officials examined only the weight and size of coins, but not their alloy composition, counterfeit coins with a lower copper content proliferated. The unintended encouragement of counterfeit coins and their circulation ended up increasing the money supply in the market. Counterfeiting continued even when coins were abundant. In the end, official coinage had to be temporarily terminated to curb inflation. In the first year of the Yongchun 永淳 era (682), having failed to control the market circulation of forged coins, the court extended capital punishment not only to counterfeiters, but also to the heads of the villages and their sub-sections where offenders resided.¹²²

In fact, counterfeiting can appear anytime and anywhere. So long as the gains obtained from counterfeiting override its cost—which includes the production of coins and the risk involved—there will be incentive for people to counterfeit. The turmoil after Empress Wu's 武后 (r. 690–705) abject failure in banning counterfeit coins is a good example of this.

During the Chang'an 長安 era (701–704), Empress Wu had sample coins exhibited in the marketplace to ensure that no unqualified coins should be used in business transactions. While it was sensible to inform people of the proper coins for use, there were no complementary policies to cope with the side effects. The immediate result was an increase in transaction costs, due both to the cost involved in identifying legal coins and to the sudden shortage of usable coins, which impeded business transactions. The concession Empress Wu then made ended up aggravating the counterfeit problems. She lowered the standard of acceptable coins, noting that those forbidden were made of iron and tin, coated with copper, or had copper content drained from a punched hole.

Such a policy was tantamount to giving a pass to counterfeit coins that did not fall into these categories. Consequently, illegal casting skyrocketed. In the southern part of the Huai and Yangtze River valleys, offenders evaded inspectors by taking advantage of the natural shields provided by lakes, rivers, and mountains. By the eras

¹²¹ See “Shi huo zhi,” in *Xin Tang shu*, *juan* 54, p. 1384.

¹²² This policy was stated in the *Xin Tang shu*, but not in the *Jiu Tang shu*. See “Shi huo zhi,” in *Xin Tang shu*, *juan* 54, p. 1384.

of Shenlong 神龍 (705–707) and Xiantian 先天 (712–713), the markets in Chang'an and Luoyang were flooded with illegal coins. Some small coins illegally made in Chenzhou and Hengzhou 衡州 (in modern Hunan) were of such poor quality that they had only rough shapes and were made of tin and iron. Even *wuzhu* coins were in use. Some people bought tin, melted it down, and used a mould for coinage. Numerous such coins could be made in a short period. The lack of punishment and the low cost of producing these coins prompted counterfeiters to action.

When the government cried up the coinage, it created even more incentive to counterfeit, due to the large potential profit. For this reason, counterfeiting became severe when Gaozong and Suzong had such coins cast. The coinage of *Qianfeng quanbao* created the first surge of counterfeit coins in Tang history. The damage was done even though Gaozong abolished the coin in less than a year. The situation was worse in Jingzhou 荊州 (in modern Hubei), Tanzhou 潭州 (in modern Hunan), Xuanzhou, and Hengzhou. Offenders hid their boats in the rivers to evade inspection. Even though Gaozong banned the circulation of counterfeit coins, the situation persisted.¹²³ Crying up the coinage during Suzong's reign brought the counterfeiting problem to a new height. Despite the severe punishment carried out in the two capitals, the court was unable to stop it. Due to hyperinflation, many commoners had no way to make a living. Their opportunity cost for counterfeiting became very low. In microeconomic theory, the opportunity cost of a choice is that of the best forgone alternative. At a time when commoners might die one way or the other, even severe punishment could not deter them from risking their lives to try their luck with counterfeiting.

Since counterfeiters were solely driven by profit, counterfeiting would cease to exist once it became unprofitable. This explains why the problem began to subside in the latter half of the Tang dynasty, although coins were increasingly scarce. Copper had become more valuable for making religious artefacts than for making coins. People had no incentive to counterfeit. Instead, coins were melted down for their copper content. Counterfeit coins of this period were mainly made of other metals, such as lead and tin.

In fact, the shortage of coins now became so severe that lead and tin coins began infiltrating the monetary market. For this reason, in the third year of the Taihe 太和 era (829), during Wenzong's 文宗 reign (827–840), punishment was extended to those who used these coins. Those who traded less than one string were to be thrashed twenty times; those who traded less than ten strings were to be thrashed sixty times and imprisoned for three years; and those who traded more than ten strings were to be executed in public. Moreover, rewards were given to those who reported the

¹²³ See "Shi huo zhi," in *Jiu Tang shu*, *juan* 48, p. 2096.

offenders.¹²⁴ These measures revealed that copper coins were in severe shortage. Counterfeiting was profitable only if coins were made mainly of tin and lead.

There were many factors that favoured counterfeiting, making it less risky and less costly. The shortage of coins was certainly one important factor. It could fuel counterfeiting only when counterfeit coins were generally accepted as a means of exchange. During Tang times, that was the case. They were so widely accepted that whenever the court banned their use, it faced strong resistance from the market. In the eleventh year of Tianbao (752), the court made 300,000 strings of coins available to pay to commoners to trade in their bad coins within a month.¹²⁵ The people were so used to the bad coins in circulation that these new regulations worried them. Moreover, the quantity of bad coins was so large that when the court set up a booth in the southern street of Longxing Monastery 龍興觀 to provide coins for the exchange, the poor and the weak were unable to queue up in time. The court was forced to relax its restrictions.¹²⁶

The wide acceptance of counterfeit coins raises a crucial question. Did these coins have the same value as legal coins in the market? Or was it just that, as Kuroda Akinobu 黒田明伸 has pointed out for later eras of Chinese history, the coins' value in the marketplace fluctuated according to their copper content, and that the practice of counting short of a hundred was also a reflection of this flexibility?¹²⁷ It appears that counterfeit coins had similar, if not the same, purchasing value as legal coins during

¹²⁴ The edict was recorded in “Wenzong benji” 文宗本紀 (Basic Annals of Wenzong), and the proposal made by the Secretariat-Chancellery was recorded in the “Shi huo ji” of the *Jiu Tang shu*. The former noted that the reward was 50 coins for each string, while the latter noted that it was 5,000, with a maximum of 300,000 coins, which was approved by the emperor. The edict revealed that the reward had been reduced from the ratio of 1:100 that was implemented in the fourth year of Yuanhe. Wenzong considered the original ratio extreme, so he had it reduced. See “Wenzong benji,” in *Jiu Tang shu*, *juan* 17a, pp. 531–32; “Shi huo zhi,” in *Jiu Tang shu*, *juan* 48, p. 2105. It was likely that the reward during Wenzong’s reign was of 5,000; otherwise the deduction would be too great for the policy to be effective.

¹²⁵ See Xuanzong’s edict “Ling suo si shouhuan e’qian chi” 令所司收換惡錢敕, in *Quan Tangwen xinbian*, *juan* 36, p. 441.

¹²⁶ The *Zizhi tongjian* noted that it was Yang Guozhong 楊國忠 who proposed relaxing the restrictions. See *Zizhi tongjian*, *juan* 216, pp. 6909–10. The information concerning the exchange of bad coins for millet, silk tabbies, and good coins was from the same source. The *Zizhi tongjian* only noted that the government took out several hundred thousand strings of coins, whereas the *Xin Tang shu* clearly noted that it was 300,000 strings. See “Shi huo zhi,” in *Xin Tang shu*, *juan* 54, p. 1386.

¹²⁷ Kuroda observes that these were the methods used by the market in treating coins of different qualities. See Kuroda, *Kahei shisutemu no sekaishi*, pp. 101–4.

the early and high Tang. This is demonstrated by the full functioning of Gresham's law and by the resistance to trading in counterfeit coins at a discount.

After the issuance of *kaiyuan tongbao*, the first mention of the problem of counterfeit coins occurred in the fifth year of the Xianqing 顯慶 era (660). By then, an increasing number of counterfeit coins were in circulation. The law that "bad money drives good money out of circulation," commonly known as Gresham's law (although it was not discovered by him), was proven correct. The law states that when bad coins have the same exchange value as good coins in transactions, the latter would be withdrawn into hoards, exported, or reduced through clipping or "sweating."¹²⁸ In order to regain the market share of government-cast coins, the Tang court implemented a trade-in policy. The first proposal was for one good coin in exchange for five bad ones. This ratio was likely based on the general intrinsic value of bad coins at the time, but it would mean a loss of fourth-fifths of the purchasing power for the holders. Naturally, commoners did not answer the call. To encourage his people to turn in counterfeit coins, Gaozong changed the exchange rate to 1:2. However, this only fuelled commoners' expectations of further concessions. They preferred to await a relaxation of the law. This suggests that the purchasing value of bad coins to good coins was higher than 1:2, and could easily have been equal.

The historical records make it clear that during Xuanzong's reign, the emperor forbade any readjustments of coin value by the market. Since the government did not allow holders to raise the face value of fine coins in relation to the bad ones, the rich and powerful collected good coins in the capital and sold them south of the Huai and Yangtze River valleys, where law enforcement was relatively lax. The number of coins being transported was so great that shiploads and cartloads of them followed one another. As a result, legitimate coins circulating in the two capitals were slowly replaced by counterfeit ones. A thousand of these bad coins weighed no more than three or four catties. Gresham's law was in full effect. The edict "Jin Dongdu yongqian biandong zhao" 禁東都用錢變動詔 (Forbidding the Changing of Coins Circulating in the East Capital) referred to changes in the coins used in the

¹²⁸ "Gresham" refers to Sir Thomas Gresham (1519–1579), who proposed to Queen Elizabeth in 1558 that the concurrent circulation of good and bad coins was responsible for the loss of state wealth. For a brief introduction, see George A. Selgin, "Gresham's Law," in *EH.Net Encyclopedia*, edited by Robert Whaples, 9 June 2003, accessed 25 August 2016: <http://eh.net/encyclopedia/greshams-law/>. According to Kindleberger, the idea of the law can be traced to Nicholas Oresme, Bishop of Lisieux in France, who wrote *De Moneta* in about 1360. Oresme attacked monetary debasement, asserting that the king had no right to change the weight or fineness of coins, nor the bimetallic ratio. For a more detailed discussion, see "Gresham's Law," in Charles P. Kindleberger, *Economic Laws and Economic History* (Cambridge: Cambridge University Press, 1989), pp. 43–66.

eastern capital; Xuanzong demanded an investigation.¹²⁹ This edict clearly reflected this situation. As counterfeit coins had the same purchasing value in the two capitals, where law was more forcefully implemented, counterfeiting was especially rife in Guangling 廣陵 (in modern Jiangsu), Danyang 丹楊 (in modern Jiangsu), and Xuancheng 宣城 (in modern Anhui) during the latter years of Kaiyuan era. The coins cast in unofficial foundries had dozens of variations. Some reached a point where the shape was barely visible. One official coin could be exchanged for seven or eight of these bad coins.¹³⁰

The above record shows that the readjustment of coin value was actually common in areas where the law was not as strictly enforced. In the Huai and Yangtze River valleys, there was certainly such a practice. The situation worsened in 831, when the illegal casting of lead and tin coins became an issue. These coins were traded at a low price, and commoners began to use them together with good coins in business transactions. Most likely they were mixed in with good coins in a string for larger transactions. The coins cast in Jiangxi 江西 (in modern Jiangxi), E'yue 鄂岳 (covering parts of Hubei, Henan, and Hunan), and Guiguan 桂管 (in modern Guangxi) were particularly bad. Since Hengzhou and Daozhou 道州 (in modern Henan) had well-shielded mountain caves, it was difficult to apprehend offenders.

In spite of the difficulties, the court made frequent attempts to combat counterfeit coinage. The various attempts tended only to disrupt the market, halting business transactions. The most well-known episode happened in the fifth year of the Kaiyuan era (717), when Song Jing 宋璟 (663–737) proposed to halt the use of illegal coins, accepting only the standard *kaiyuan tongbao* coins. In 718, Xuanzong issued the edict “Jin e’quan chi” 禁惡錢敕 (Banning Bad Coins), ordering the collection and recasting of bad coins. He pointed out that the undifferentiated use of good and bad coins would widen the social gap. The rich and powerful, more resourceful and better informed, could obtain profit through spending bad coins and keeping good ones, whereas commoners would suffer from transactions. Sample coins were once again displayed to all.¹³¹ Chang’an was the first to see the consequences, in the form of a halt in business transactions.

The court then implemented a complementary policy to cope with the effects. This was to increase cash flow into the market in order to boost the economy. Song

¹²⁹ See Xuanzong’s edict “Jin Dongdu yongqian biandong zhao,” in *Quan Tangwen xinbian*, juan 33, p. 408.

¹³⁰ The *Jiu Tang shu* noted that one good coin could be exchanged for five bad coins, while the *Xin Tang shu* noted that one could be exchanged for seven or eight bad coins. See “Shi huo zhi,” in *Jiu Tang shu*, juan 48, p. 2099. See also “Shi huo zhi,” in *Xin Tang shu*, juan 54, p. 1386.

¹³¹ See Xuanzong’s edict “Jin e’quan chi,” in *Quan Tangwen xinbian*, juan 34, p. 414.

Jing and Su Ting 蘇頌 (670–727) requested 20,000 strings of coins from the Imperial Treasury 太府 to purchase unsold goods at the market that could be of use to the court. Moreover, officials of the two capitals, including their guardians and attendants, were to receive their salaries in coins. This is detailed in the edict “Jifeng xian geiqian zhao” 季俸先給錢詔 (Quarter Salary to be Paid in Coins).¹³² These measures were taken to release more good coins into the market through government expenses.

At the time, the circulation of counterfeit coins was most prevalent in the Huai and Yangtze River valleys. Song Jing thus sent Xiao Yinzhi 蕭隱之, the Supervisor Censor, to the area as commissioner. In order to ban counterfeit coins, Xiao forced commoners to present their coins for inspection. To avoid punishment, some presented bronze pieces in place of bad coins, while some dumped the slightly bad ones in the rivers. It was said that the sudden decrease in the money supply disrupted business transactions and resulted in hyperinflation. In 719, the court again sold 100,000 bushels of millet in the marketplace in order to buy in the bad coins in circulation for recasting.¹³³ This was intended to ease the impact on commoners during the period of transition to the complete abolishment of counterfeit coins.¹³⁴ Nonetheless, both Xiao and Song were eventually demoted in 720 because of the inflation thus caused. As a result, Zhang Jiazhen 張嘉貞 (666–729), the chief minister appointed to replace Song Jing, had the restrictions on bad coins removed. It was said that commoners were content with the new policy.

The outcome, with the demotion of Xiao and Song and the removal of the restrictions, reveals how strong market forces were. During the late Kaiyuan era, Li Linfu 李林甫 (d. 752), then Chief Minister, had the court exchange three million bolts of silk tabbies for bad coins, based on weight. Again, it was said that inflation occurred, causing over ten thousand people to file complaints every day. In the end, the court had to accept the advice of Yang Guozhong 楊國忠 (d. 756), Vice Director of the Ministry of War, who proposed restoring the use of inferior coins.

In 729, the court turned to the control of source materials to combat counterfeiting. It forbade commoners to sell copper, lead, and tin, and also forbade them to use copper to make articles. Those who mined these metals had to sell them to the government. By controlling source materials, it was hoped, private casting could be undermined.¹³⁵ However, the situation persisted.

¹³² See Xuanzong’s edict “Jifeng xian geiqian zhao,” in *Quan Tangwen xinbian*, juan 33, p. 408.

¹³³ This information concerning the purchase of unsold goods and the selling of millet is based on *Zizhi tongjian*, juan 212, p. 6735.

¹³⁴ See Xuanzong’s edict “Jinduan e’qian zhao” 禁斷惡錢詔, in *Quan Tangwen xinbian*, juan 28, p. 347.

¹³⁵ This information is based on *Zizhi tongjian*, juan 213, p. 6786. See also Xuanzong’s edict “Shenyan tongjin zhi” 申嚴銅禁制, in *Quan Tangwen xinbian*, juan 23, pp. 293–94.

To sum up, the Tang court tried to control counterfeiting by banning metal sales at the source and by stopping circulation in the market. According to modern economists, the two most effective measures to obstruct counterfeiting are to make it more difficult and to impose severe punishments. The Tang court attempted both measures, but with little effect. The root of the problem was the inability to enforce the law because of resistance from the general public, the difficulty of catching counterfeiters, and the ambivalent attitude of officials.

The court had made counterfeiting a serious crime punishable by death. However, it was often unable to enforce the law due to the secret locations where counterfeiting took place. Worse still, the regional governments did not care to inspect the quality of coins. These reasons were cited by Gaozong when he reinstated the court's policy banning counterfeiting, with the goal of driving out bad money within two years.¹³⁶ It was only when counterfeiting had become so widespread and severe in Suzong's time that even the capital was plagued by it that the court was able to arrest offenders and to make examples of them. Yuan Zhen's "Qianhuo yizhuang" pointed out that corrupt officials and violators of the copper cash law were seldom prosecuted.¹³⁷

What worsened the situation was the inconsistency in the court's monetary policy, often fuelled by its ignorance of the possible impact on business and the life of commoners. When business came to a halt and when commoners resisted the new regulations, the court quickly increased the conversion rate between good and bad coins, relaxed its definition of bad coinage, and sometimes even relinquished its new measures. These frequent changes undermined people's trust in the government. They preferred to wait for a relaxation of the law or seek loopholes to benefit from it.

In addition to stopping counterfeiting at its source, the court also tried to restrict the circulation of bad coins by banning their use in the market, providing more good coins to gain market share, and buying in bad coins for recasting. However, these measures failed miserably. According to the two Tang histories, whenever the court tried to restrict the use of bad money, business came to a halt. Moreover, the replacement of bad coins with good coins at government expense only encouraged more counterfeiting. This negative effect is clearly shown in Xuanzong's edict "Guan shou e'qian zhao" 官收惡錢詔 (Taking in Bad Coins by the Government). In the edict,

¹³⁶ See "Shi huo zhi," in *Jiu Tang shu*, *juan* 48, pp. 2095–96. See also "Shi huo zhi," in *Xin Tang shu*, *juan* 54, p. 1384.

¹³⁷ See *Yuan Zhen ji*, *juan* 34, pp. 395–97. Han Yu 韓愈 wrote "Qianzhong wuqing zhuang" 錢重物輕狀, arguing that only the government was free to use copper, and that taxes collected should be in goods that a prefecture specialized in producing. See Ma Qichang 馬其昶, ed., *Han Changli wenji jiaozhu* 韓昌黎文集校注 (1987; reprint, Shanghai: Shanghai guji chubanshe, 1998), *juan* 8, pp. 595–96 (*juan* 37 in the original edition).

he noted that the original reason for recalling bad coins was to prevent counterfeiting, but that the exchanges never seemed to end. He therefore ordered the exchange rate between good and bad coins to be lowered. For every thousand bad coins that weighed six catties, three hundred good coins would be given in exchange. In areas where there was a shortage of good coins, the exchange could be made in textiles and other goods.¹³⁸

To conclude, the court's anti-counterfeiting policies were ineffective. It was this ineffectiveness that led to a major debate in the high Tang over allowing private coinage.

Part VIII: An Analysis of the Inflation Caused by Anti-Counterfeiting Policies

In the process of combating counterfeit coinage, there was one peculiar phenomenon, concerning the relation between the money supply and price level, that went against economic principles. When Song Jing banned counterfeit coins, especially in the Huai and Yangtze River valleys, it was said that the policy resulted in hyperinflation. The reason given by historians was *shijing butong* 市井不通, meaning that transactions became ineffective and so did the distribution of goods. This argument follows the ancient Chinese idea that prices rise due to the failure to direct goods from areas with surpluses to those with shortages. It suggests that the money supply had an inverse effect on price.

Kuroda Akinobu, who has analysed the effect of encouraging resource distribution through monetary policy, raises a similar issue. This time it was not the decrease of the money supply that led to inflation, but the increase of the money supply that resulted in deflation. He proposes that inflation caused by a decrease in productivity, as in times of drought, could actually be eased by an increase in the money supply. This was because money could reduce friction in transactions and thus could encourage imports. He uses the case of Quanzhou 泉州 (in modern Fujian) to illustrate this. In 1606, in the late Ming dynasty, there was a drought around the international port of Fujian, causing a rise in the price of grain and the emergence of privately cast coins to facilitate exchange. Normally, an increase in the money supply would push the price even further up, but the reality proved otherwise. When the government left the market to its own devices, the price of grain eventually dropped. This was because the high price level encouraged imports, and the availability of coins smoothed out the transaction process. With an increase in the supply of grain

¹³⁸ See Xuanzong's edict "Guan shou e'qian zhao," in *Quan Tangwen xinbian*, juan 33, p. 408.

in the form of imports, the price fell, and the danger of famine was averted. Kuroda therefore concludes that casting more coins was often adopted as a policy to ease famine.¹³⁹

The cases of Fujian and of the Huai and Yangtze River valleys seem to suggest that money supply has an inverse effect on price level, which contradicts modern monetary theory that a change in price level is directly proportional to the money supply. Milton Friedman was a strong supporter of the idea that inflation is caused by an increase in the money supply and that decreasing the money supply leads to deflation. The banning of counterfeit coins reduced the money supply; thus, deflation rather than inflation should result. Without enough money to perform transactions, the price of commodities would be pressured to fall.

However, this relation between price level and money supply presumes a closed economy, where the total number of products available is not affected by imports and exports. This presumption is invalid for the cases at hand. What Quanzhou and the Huai and Yangtze River valleys shared was a geographical location favourable for imports and exports. Both provided convenient water transportation for trade. During Tang times, the Huai and Yangtze River valleys were active business areas, and this was said to have contributed to the flourishing of counterfeit coinage. With a large influx of products, the exchange value of money was high, even for inferior coins. In these bustling business centres, the supply of goods was not confined to local production, but also included imports from other regions. This means that a change in the money supply, and the subsequent effects on price levels, would eventually lead to a change in supply and demand for import and export goods.

This effect is similar to that of changes in the number of sellers and buyers, which also cause the supply or demand curve to shift. The supply curve indicates the quantity that sellers are willing and able to supply at any given price (“quantity supplied”). The demand curve indicates the quantity that consumers are willing and able to buy at any given price (“quantity demanded”). An increase in imports would cause the supply curve to shift to the right, indicating an increase in supply at the same price level; an increase in exports would cause the demand curve to shift to the right, indicating an increase in demand at the same price; and vice versa.

As in the case of Fujian, famine in combination with an increase in the money supply would lead to hyperinflation. It was precisely this inflation that attracted others to bring in grain for sale in these areas; that eventually brought down the price to a level similar to that in surrounding areas. The same principle applies to the cases in Tang China when a ban on counterfeit coins caused disruption to the market and eventually resulted in hyperinflation. There was a deflation-inflation process in action.

¹³⁹ See Kuroda, *Kahei shisutemu no sekaishi*, pp. 50–53.

When the government ruthlessly banned counterfeit coins in the Huai and Yangtze River valleys, the immediate effect was a decrease in the money supply. According to the historical records, Xiao Yinzhi had officials inspect the coins of every household, causing people to dump the bad ones in the river to avoid punishment. The effect was similar to a decrease in income, causing the demand curve to shift to the left. Now, at the same price, consumers demanded less because they had less to spend. In order for the suppliers to sell all of their products, prices had to drop. The immediate result was deflation because supply could not respond to the situation as quickly as demand. Traders who had already brought in goods could not redirect their products without additional cost. As there was a sudden decrease in the money supply, the equilibrium price (abbreviated as E in the figures) had to fall for the traders to clear their stock. At this price, the quantity demanded and the quantity supplied meet; there is no surplus of supply or demand.

This effect can be demonstrated by the demand and supply diagrams below. Although the diagrams are basically textbook economics, they demonstrate the basic concept of the deflation-inflation process. Figure 1: The new policy meant that commoners had less to spend at the same price level, causing the demand curve to shift to the left and pushing prices down so that there was no surplus of goods.

Since the Huai and Yangtze River valleys had the merit of convenient transportation, imports decreased because price levels there were now lower than elsewhere; exports were favoured. When their stock ran out, sellers left the areas with less intention to return, due to the low price level. On the other hand, buyers might rush in. A combination of the two would eventually lead to a rise in price levels, as the decrease in supply from other areas was accompanied by an increase in demand. The shift of the demand curve to the right and the supply curve to the left fully illustrates the “ineffective distribution of goods” that traditional historians frequently pointed out. This can be seen in Figure 2 below.

Historians have emphasized the ineffective distribution of goods, the second phase of the deflation-inflation process. This happens in places where business flourishes and imports play an important role. The theory that a decrease in money supply tends to cause deflation does not hold in this situation simply because the hypothesis of a closed economy is invalid in the case of the Huai and Yangtze River valleys.

The time lag between the decrease in the money supply and the subsequent inflation supports the idea that deflation might have happened in the meantime. According to the historical records, Song Jing and Xiao Yinzhi were demoted in 720 due to the hyperinflation caused by their policy, two years after it was first implemented in 718. This suggests that inflation did not appear immediately. The historians’ account of the decrease in the money supply and the subsequent inflation actually overlooked the intermediate process, which was deflation.

Figure 1. Deflation as a Result of a Decrease in Demand

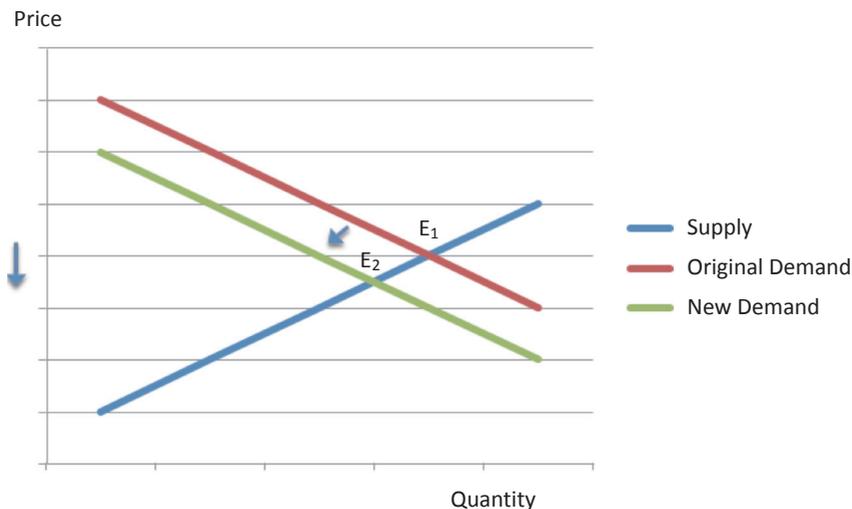
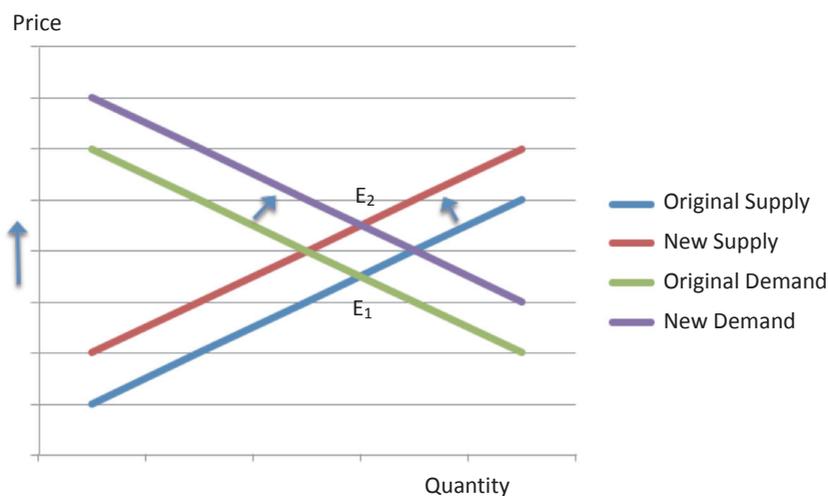


Figure 2. Inflation as a Result of an Increase in Demand and a Decrease in Supply



That being solved, one might wonder why the same deflation-inflation process did not occur when deflation became a major concern beginning in 786.¹⁴⁰ The

¹⁴⁰ There were various memorials in the mid-Tang period concerning the shortage of bronze coins. The earliest seems to have been Lu Zhi's 陸贄 "Junjie fushui xu baixing liutiao" 均節賦稅恤百姓六條. See Lu Zhi, "Junjie fushui xu baixing liutiao," in Wang Su 王素, ed., *Lu Zhi ji* 陸贄集 (Beijing: Zhonghua shuju, 2006), *juan* 22, pp. 735–52. The other more significant ones were Yuan Zhen's "Qianhuo yizhuang" and Han Yu's "Qianzhong wuqing zhuang."

shortage of coins eventually became so severe that the court had to institute various measures to increase circulation. However, the same deflation-inflation process did not occur this time, because the shortage of bronze coins was not a result of government policy, but of economic forces. Copper now had a much higher non-monetary value, causing people to stop counterfeiting and even to violate the law to melt coins for the copper. As a result, there was a nationwide decrease in the money supply. Deflation was not limited to a certain area; thus, there was not enough price discrepancy to encourage the flow of products between different regions. Even if there had been, the effect on the overall price level remained minimal.

Part IX: The Debate on Private Coinage and the Significance and Intricacies of Liu Zhi's Memorial

The negative effect of anti-counterfeiting measures on business transactions eventually forced the Tang court to consider permitting private coinage. Xuanzong was the emperor who issued the largest number of edicts banning bad coins. However, it was also under his reign that the proposal to allow private coinage was raised, in the twenty-second year of Kaiyuan (734),¹⁴¹ probably because the court had come to realize that combating counterfeit coinage was difficult, and that casting full-bodied coins was costly. Both the *Xin Tang shu* and the *Zizhi tongjian* noted that the proposal to allow private coinage was originally made by Zhang Jiuling 張九齡 (678–740), Vice Director of the Secretariat 中書侍郎. His memorial was not recorded in the *Jiu Tang shu* and the *Zizhi tongjian*. Excerpts from it can be seen in the *Xin Tang shu*, where he echoed the traditional argument that the ancients created coins for standardizing the measurement of value, something that commodity money such as cloth and millet could not do. He noted that in Tang times, however, coins had become much more valuable than textiles due to their scarcity. The court could not provide enough coins for business transactions in general, and the high cost of coinage also yielded little profit for the state reserve. His proposal was based on the belief that market forces would stimulate production and alleviate shortages. Nothing was said about whether the use of full-bodied coins should be maintained in the market, nor if there should be any quality control of privately cast coins.¹⁴²

¹⁴¹ The *Jiu Tang shu* noted that the proposal was raised in the twenty-second year of Kaiyuan, whereas *Tang da zhaoling ji* noted that the edict was issued in the ninth year of Kaiyuan, drafted by Zhang Jiuling. See “Shi huo zhi,” in *Jiu Tang shu*, *juan* 48, p. 2097; *Tang da zhaoling ji*, *juan* 112, p. 582.

¹⁴² His argument was not recorded in the *Jiu Tang shu*, but was recorded in the *Xin Tang shu*. See “Shi huo zhi,” in *Xin Tang shu*, *juan* 54, p. 1385.

The wording of Xuanzong's edict "Xiangyi fangjin sizhuqian zhao" 詳議放禁私鑄錢詔 (On Allowing Private Coinage) was extremely similar to Zhang's memorial and is believed to have been drafted by him.¹⁴³ Although Xuanzong claimed to solicit advice from his subjects on whether or not private coinage should be permitted, he indicated his intention of following the example of Emperor Wen of Han 漢文帝 (r. 180–157 b.c.), who had insisted on allowing private coinage despite the criticism of Jia Yi 賈誼 (200–168 b.c.).

The proposal faced severe criticism. Chief Minister Pei Yaoqing 裴耀卿 (681–743); Vice Director of Imperial Gatekeepers 黃門侍郎 Li Linfu; Vice Governor of Henan 河南少尹 Xiao Jiong 蕭炅; Director of the Palace Library 秘書監 Cui Mian 崔沔 (673–739); and Administrative Supervisor of the Left Guards 左監門錄事參軍 Liu Zhi all disapproved of it.¹⁴⁴ Pei argued that the policy would encourage people to cast coins rather than farm. Moreover, the quality of coins would only become worse. Cui pointed out that as long as there were enough coins for transactions, there was no need to have too many of them. Moreover, the court could implement other policies to reduce production costs, such as collecting taxes in copper in commutation of labour service.¹⁴⁵

Liu Zhi's memorial was the most detailed and representative.¹⁴⁶ He held the traditional point of view that coinage was a tool of governance and the key to exerting control over the economy. In response to the edict, he noted that King Bi of Wu 吳王濞 (216–154 b.c.) had wealth comparable to the emperor of Han 漢 (206 b.c.–a.d. 220) precisely because he was allowed to cast coins. What was left unmentioned in the memorial was the rebellion of the seven kings led by King Bi during Emperor Jing's 景帝 reign (157–141 b.c.). The insinuation was that private coinage posed a grave danger to the stability of the empire, because political and military power almost always accompanied economic power. Moreover, Liu highlighted the disastrous effect on wealth distribution once private coinage was allowed: only the rich would be able to cast coins, while the poor served the rich by providing labour; the gap between the two classes would be further widened.

Liu pointed out that the most likely result of allowing private casting was a worsening quality of coinage. It is true that the supply of coins would increase if the court let the market take care of itself. However, if coinage yielded little profit for state reserves, this would also be the case for private producers. While the court might cast full-bodied coins at its own cost in order to maintain its sovereign authority, the only driving force for private casters would be profit. Since it was difficult to reduce

¹⁴³ See Xuanzong's edict "Xiangyi fangjin sizhuqian zhao," in *Quan Tangwen xinbian*, *juan* 30, p. 373.

¹⁴⁴ The *Jiu Tang shu* does not mention Cui Mian. His name was added based on "Shi huo zhi," in *Xin Tang shu*, *juan* 54, p. 1385.

¹⁴⁵ See *Zizhi tongjian*, *juan* 214, p. 6806.

¹⁴⁶ For Liu Zhi's memorial, see "Shi huo zhi," in *Jiu Tang shu*, *juan* 48, pp. 2097–99.

production costs while maintaining the same quality, they could make a profit only by casting inferior coins, such as those that contained a larger percentage of iron, tin, and lead. In fact, counterfeiters were already doing this, and would go on to produce even more inferior coins if private casting was allowed. Worse still, they might melt down legal coins to make inferior ones. Without proper regulations for quality control, coins in circulation would become worse and worse. There would eventually be a wealth transfer from those who were less informed and less resourceful to those who were better informed and more resourceful. If quality were strictly controlled, however, no one would be willing to cast coins. Instead, Liu proposed to ban the exploitation and use of copper among the populace. The value of copper as metal would then fall, which could effectively reduce the cost of coinage.¹⁴⁷

Liu's arguments were valid, but he made two additional assertions that go against modern economics and are worth further investigation. Liu argued as follows:

When goods are worth less, it hurts farmers; when coins are worth less, it hurts merchants. When goods are dear, coins are worth less. The reason that coins are worth less is that there are too many goods. When goods are plentiful, measures should be taken to make them less plentiful. When goods are insufficient, measures should be taken to increase them so that they will be worth less.

物賤傷農，錢輕傷賈。物重則錢輕，錢輕由乎物多，多則作法收之使少，物少則作法布之使輕。¹⁴⁸

The crucial point in understanding this passage is the meaning of *zhong* 重 (worth more) and *qing* 輕 (worth less). There has been a long tradition of using them to refer to the relative value of goods and coins. *Zhong* means that it has a higher exchange value, whereas *qing* means the opposite. The use of these terms was still current in the Tang, as the problem of deflation after Dezong's reign was often referred to at the time as *qianzhong wuqing* 錢重物輕 (coins are dear and goods are cheap)¹⁴⁹ or *huoqing qianzhong* 貨輕錢重 (goods are cheap and coins are dear).¹⁵⁰

¹⁴⁷ For a detailed discussion of the various arguments over allowing private casting, see Herbert, "A Debate in T'ang China on the State Monopoly on Casting Coin," pp. 253–92. Herbert focuses mainly on the literary sources, and does not mention the illogical arguments in Liu Zhi's memorial.

¹⁴⁸ "Shi huo zhi," in *Jiu Tang shu*, *juan* 48, p. 2098.

¹⁴⁹ See Han Yu, "Qianzhong wuqing zhuang," in *Han Changli wenji jiaozhu*, pp. 595–96; Yuan Zhen, "Qianzhong wuqing yi" 錢重物輕議, in *Yuan Zhen ji waiji* 元稹集外集, *juan* 2, in *Yuan Zhen ji*, p. 651.

¹⁵⁰ "Huoqing qianzhong, zhengshui an jia" 貨輕錢重，徵稅暗加 (goods are cheap and coins are dear, taxation covertly increasing). See Xuanzong's edict "Ling bailiao chen qianzhong wuqing lihai zhao" 令百寮陳錢重物輕利害詔, in *Quan Tangwen xinbian*, *juan* 61, p. 753.

In the first line, Liu states that deflation will hurt farmers, while inflation will hurt merchants. Farmers suffer in times of deflation because they are producers of goods. A fall in the value of their produce will have a direct negative impact on their income. This idea is supported by modern economics. Liu then adds that merchants will be harmed if coins have less purchasing power, meaning inflation. However, modern economics notes that merchants benefit from inflation. Unlike farmers, who are producers of goods, merchants are not producers of coins. They simply use them as a tool to facilitate exchange. Moreover, inflation could encourage those who are holding coins to spend them on goods, especially when further inflation is expected. Commerce could thus be fostered. In fact, it is generally agreed among modern economists that deflation causes more damage to the economy than inflation. Although the medieval economy was significantly different from the modern one, and the two are not readily comparable, merchants in Tang China would not necessarily suffer from inflation unless they had hoarded coins as a way of investment.

Another of Liu's ideas that goes against both traditional Chinese monetary theories and modern economics is his version of the relation between money supply and goods. He claims that the reason coins had a lower exchange value (*qing*)—in other words inflation—was that there was an excessive supply of goods.

Traditional Chinese monetary theories maintain that inflation is caused either by an excessive supply of coins or by an insufficient supply of goods. Robert M. Hartwell's research on classical monetary analysis and economic policy in Tang-Northern Song China revealed that, by the middle of the second century b.c., the series of propositions which formed classical Chinese monetary theory could be summarized by this equation: The quantity of money in circulation is equal to average price times the total output of goods.¹⁵¹ A more representative argument, earlier than Liu Zhi's, was made by Lu Zhi 陸贄 (754–805) during Dezong's reign:

When goods are cheap, it is because coins are scarce. When coins are scarce, they have a higher exchange value. When they have a higher exchange value, the court should cast more and release them to the market so that they have a lower exchange value. When goods are expensive, it is because coins are plentiful. When coins are plentiful, they have a lower exchange value. When they have a lower exchange value, the court should implement policies to recall them so that they have a higher exchange value. This is to say that the

¹⁵¹ See Robert M. Hartwell, "Classical Chinese Monetary Analysis and Economic Policy in T'ang-Northern Sung China," *Transactions of the International Conference of Orientalists in Japan* 13 (1968), pp. 70–81. For an introduction of the *qingzhong* economics, see also Tamara T. Chin, *Savage Exchange: Han Imperialism, Chinese Literary Style, and the Economic Imagination* (Cambridge, MA: Harvard University Asia Center, 2014), pp. 31–48.

price of goods is linked to the quantity of coins available, whereas the quantity of coins available depends on their release or recall by the court.

物賤由乎錢少，少則重，重則加鑄而散之使輕；物貴由乎錢多，多則輕，輕則作法而斂之使重。是乃物之貴賤，繫於錢之多少；錢之多少，在於官之盈縮。¹⁵²

Lu Zhi's argument concerning the relation between price and the money supply agrees with the quantity theory in modern economics. The quantity theory has a long history; the early versions, such as Jean Bodin's formulation in the seventeenth century, found a causal relationship between the supply of goods and the supply of money.¹⁵³ Irving Fisher proposed a better-known equation that belongs to the modern quantity theory. According to him, the quantity of money (M) times its velocity of circulation (V) should be equal to price (P) times the volume of transactions (T); thus the equation $MV = PT$. Since the velocity and volume of transactions are presumed to be relatively stable, when the amount of money is insufficient the price of each transaction has to fall to ensure that all the business transactions take place. The reverse is also true.¹⁵⁴

The traditional Chinese theory, Lu Zhi's idea, and the quantity theories in modern economics all suggest that a lower exchange value of coins is caused either by an increase in the money supply or by a decrease in the volume of transactions, which is determined by output of goods. In a free economy, the price level is governed by supply and demand, so that an excessive supply of goods will pressure the price to go down and an equilibrium price will be achieved. Presuming there are no other variables, prices should go down when goods are plentiful. This means that the exchange value, in other words the purchasing power of coins, will increase. This is just the opposite of what Liu proposes. It is unclear how Liu Zhi came up with his idea that coins had a lower exchange value when goods were plentiful. Most probably there is a textual transmission error. Other possibilities are Liu's misunderstanding of how the economy works, or some condition specific to the High Tang economy that remains unknown to readers of the present day. It is likely due to this illogic that discrepancies have arisen in the rendering of this passage.¹⁵⁵

¹⁵² See Lu Zhi, "Junjie fushui xu baixing liutiao," in *Lu Zhi ji*, *juan* 22, pp. 743–44.

¹⁵³ I owe thanks to the anonymous reader who pointed out that Liu Zhi's argument is similar to early versions of the quantity theory of money, and that modern quantity theory is not limited to issues of supply.

¹⁵⁴ See Irving Fisher, "Purchasing Power of Money as Related to the Equation of Exchange," chap. 2 in *The Purchasing Power of Money: Its Determination and Relation to Credit Interest and Crises*, new and rev. ed. (New York: Macmillan, 1926), pp. 8–32.

¹⁵⁵ Helen Wang translated the passage as follows: "When commodities are cheap, it harms
(Continued on next page)

The other request for private coinage after this major debate was made by Li Wei 李禕 (d. 743), Prince of Xin'an Commandery 信安郡王. Like Zhang, he suggested condoning private casting so that monetary supply could increase. Due to his high status, no one dared speak against him, except for Wei Boyang 韋伯陽, Director of the Granaries Bureau 倉部郎中. The prince's proposal was dropped as a result.¹⁵⁶

The debate on private casting revealed that the two major problems plaguing the court were the difficulty of banning counterfeit coins and the insufficient supply of coins. Throughout the Tang dynasty, the court had tried various methods to increase the production of coins, to the point that during the Kaiyuan era even farmers were recruited. Since they were unskilled, and suffered greatly from the policy, Wei Lun 韋倫 (716–799), Administrative Assistant of Palace Construction 內作判官, proposed to recruit professional workers with large rewards.

During Daizong's reign, officials pointed out that there were insufficient coins for the government to use as a mechanism to stabilize the price of grain and millet; the burial of coins as funeral objects, private hoarding, and the melting down of coins for their copper content made the matter worse. Liu Yan 劉晏 (715–780), then the Salt and Iron Commissioner, resorted to selling local produce in the Huai and Yangtze River valleys and had the profit spent on coinage. The coins thus cast were then turned in to the court as tax payments. This decision was made because the transportation costs incurred in sending the produce to the capital outweighed its value, and the court was also in dire need of coins. Each year, over 100,000 strings of coins were cast in this manner and sent to Chang'an, Jingzhou, and Yangzhou 揚州. Liu Yan's method was noteworthy, as it inspired the use of coins as tax payments during the taxation reform in Dezong's reign.

Part X: The Severe Shortage of Coins and Its Causes

While the pressure to increase production of full-bodied coins never ceased throughout the Tang dynasty, counterfeiting was no longer a problem from Dezong's reign

(Note 155—*Continued*)

agriculture. When coins are plentiful, it harms commerce. When commodities are in short supply, then coins are plentiful. When coins are plentiful, then commodities will be in short supply. If commodities are in short supply, then implement a measure that collects them and reduces their quantity. When commodities run short then make a law that distributes them and makes them plentiful." See Chang Xu, "Managing a Multicurrency System in Tang China: The View from the Centre," trans. Helen Wang, *Journal of the Royal Asiatic Society*, 3rd ser., 23, no. 2 (April 2013), p. 235.

¹⁵⁶ Most dared not go against Prince Wei's proposal, as he was the younger brother of Xuanzong. See "Shi huo zhi," in *Xin Tang shu*, *juan* 54, pp. 1385–86.

onwards. Instead, deflation was a matter of concern during the second half of the dynastic period. Both Xianzong and Muzong solicited advice on this issue.¹⁵⁷ It was believed that the deflation was caused by the shortage of coins. This time the shortage did not encourage counterfeiting, because by the ninth year of the Zhenyuan era (793) counterfeiting was no longer profitable. Worse still, coins were melted down to make copper articles worth more than the coins. At the time, a thousand coins were made from six catties of copper. Using one catty of copper to make objects, one could get six hundred coins in return. Therefore, each thousand coins melted to make copper articles could be worth 3,600 coins, which was 3.6 times the original value. The profit was indeed exorbitant. In order to prevent people from melting coins, the court made it illegal for the public to use copper to make anything other than mirrors. Dezong's edict "Jin xiaoqian chi" 禁銷錢敕 (To Ban the Melting of Coins) rescinded the ban on the making and trading of bronze objects, but he imposed a price ceiling on them. Each catty of them could not be worth more than 160 coins. Six catties could be sold only for 960 coins, thus making it unprofitable to melt coins for the copper. Lastly, the melting of coins was strictly forbidden and would be punished like counterfeiting.¹⁵⁸

Most scholars agree that this surge of demand for copper came from Buddhists. Copper was used to make bells and Buddhist images in temples. During the mid-Tang period, Buddhism had begun to take its toll on the economy. Before the An Lushan rebellion, Buddhist temples had already occupied large portions of land for rent without paying taxes. When the rebellion broke out, the court gave out monks' and nuns' certificates for a fee, and even let Buddhists buy their way into political posts. From then on, they became more influential economically and enjoyed the political benefits that came with their posts.¹⁵⁹ Kenneth Ch'en has provided a detailed study of their wealth. They received land and other forms of donations from both the imperial house and the rich, and they used various means to procure more wealth through land consolidation and loans. These practices deprived the government of revenue amounting to millions in cash and millions of bushels of grain. Not only did Buddhists not contribute their share of farming and weaving, but they also consumed clothes and goods that were worth more than two million strings of cash annually. There were also many tax exemptions for the large numbers of real Buddhists, false ones, and the wealthy who kept their property at temples as pseudo-donations.

¹⁵⁷ See Xuanzong's edict "Ling bailiao chen qianzhong wuqing lihai zhao."

¹⁵⁸ See Dezong's edict "Jin xiaoqian chi," in *Quan Tangwen xinbian*, juan 54, p. 676.

¹⁵⁹ See Wei Chengsi 魏承思, "Tangdai jingji he fojiao xingshuai" 唐代經濟和佛教興衰, *Fayin* 法音, 1988, no. 4, pp. 4-9.

Kenneth Ch'en concluded that Wuzong's suppression of Buddhism was a decision made in reaction to serious economic problems and their social implications.¹⁶⁰

Han Yu's 韓愈 (768–824) best known pieces, "Lun fogu biao" 論佛骨表 (On the Relics of Buddha), "Yuan dao" 原道 (On the Authentic Way), and "Yuan xing" 原性 (On the Authentic Nature) were written to combat Buddhism.¹⁶¹ Part of the reason he protested against Buddhism was the damage it was causing to the state economy. Not only did the Buddhists possess much wealth, but the making of bronze statues also consumed a large amount of copper that could otherwise have been used for casting. For this reason, in the Baoli 寶曆 era (825–827), Wang Qi 王起 (760–847), the Administrator of Henan, again proposed to punish coin melting in the same way as counterfeiting. In 829, the court instituted the death penalty for those who made Buddhist images with copper.¹⁶²

When Wuzong forcibly suppressed Buddhism, Buddhist images, bells, chimes, and incense holders were melted to make coins known as *Huichang kaiyuan*. These coins were relatively inferior, but they temporarily increased the money supply and resulted in a slight increase in the relative price of silk tabbies. The effect can be seen in Wuzong's edict "Liubu xianqian chi," in which he noted that the price of a silk tabby had increased under the new issuance. From the third month of the sixth year of the Huichang era (846) onwards, official salaries were to be paid with coins. Due to the scarcity of coins, however, half the salaries were in reality paid in silk tabbies at an estimated rate of exchange. Scholars also believe that the Two-Tax system, proposed by Chief Minister Yang Yan 楊炎 (727–781) and established by Dezong in 780, further increased the demand for coins and intensified the shortage.

The Two-Tax system was revolutionary in the history of Chinese taxation.¹⁶³ It

¹⁶⁰ See Kenneth Ch'en, "The Economic Background of the Hui-ch'ang Suppression of Buddhism," *Harvard Journal of Asiatic Studies* 19, no. 1/2 (June 1956), pp. 67–105. For a discussion of Buddhist monasteries as a social and economic force in medieval China, see Jacques Gernet, *Les aspects économiques du bouddhisme dans la société chinoise du Ve au Xe siècle* (Saigon: École Française d'Extrême-Orient, 1956). For the translated version, see Jacques Gernet, *Buddhism in Chinese Society: An Economic History from the Fifth to the Tenth Centuries*, trans. Franciscus Verellen (New York: Columbia University Press, 1995). See also the review article by D. C. Twitchett, "The Monasteries and China's Economy in Medieval Times," *Bulletin of the School of Oriental and African Studies* 19, no. 3 (1957), pp. 526–49.

¹⁶¹ For a discussion of Han Yu's role in combating Buddhism, see Ji Chengming 吉成名, "Lun Tangdai fan fo douzheng" 論唐代反佛鬥爭, *Hunan chengshi xueyuan xuebao* 湖南城市學院學報, 2010, no. 2, pp. 38–41.

¹⁶² These two policies concerning the making of bronze statues are recorded in the *Xin Tang shu*, but not in the *Jiu Tang shu*. See "Shi huo zhi," in *Xin Tang shu*, *juan* 54, p. 1390.

¹⁶³ By 780, a tax reform was necessary because the *zuyongdiao* 租庸調 tax system ceased to

(Continued on next page)

was a progressive tax system based on property, and was collected twice a year. One of its innovations was to use coins instead of goods as a measure of value for tax payments. Although in practice tax payments were often converted to silk, this policy inevitably increased the desirability of coins.¹⁶⁴ During the early Zhenyuan era, deflation

(Note 163—Continued)

function properly. According to Twitchett, the *zuyongdiao* system consisted of four basic tax liabilities. These included a tax in grain and a tax in kind paid in cloth, together with two separate types of labour service, the regular annual corvée and miscellaneous labour service. See Twitchett, *Financial Administration under the T'ang Dynasty*, p. 25. Traditionally, the system was said to be closely related to the *juntian zhi* 均田制 (equal-field system), under which commoners allegedly received a certain area of land based on the number of male adults in their household. As the equal-field system broke down, due to the amalgamation of land by wealthy families, those who became tenants could no longer afford the land tax imposed on them on top of rent, and this eventually caused many to flee their villages. The An Lushan rebellion further accelerated the breakdown of the system. Han Guopan 韓國磐 calculates the number of household registrations after the rebellion and concludes that they had dropped to one-fourth of the original. He notes that war, the accumulation of property by the wealthy, migration to the south, and tax evasion all contributed to this severe decrease in taxable households. The situation worsened when the Uighurs looted the eastern capital Luoyang after they had assisted the emperor in recovering it. See Han Guopan, *Sui Tang Wudai shigang* 隋唐五代史綱 (1961; reprint, Beijing: Sanlian shudian, 1962), pp. 188–90. For a study of population registration in the eighth century, see E. G. Pulleyblank, “Registration of Population in China in the Sui and T'ang Periods,” *Journal of the Economic and Social History of the Orient* 4, no. 3 (December 1961), pp. 289–301. The transition from the *zuyongdiao* system to Two-Tax began as early as Suzong's reign, when the principles and methods of taxation, and the manner of dividing tax payments into three portions, were all progressing to what became known as the Two-Tax system. See Li Jinxiu, *Tangdai caizhengshi gao* 唐代財政史稿 (Beijing: Beijing daxue chubanshe, 2001), pp. 614–31.

¹⁶⁴ For a detailed review of the studies on the Two-Tax system done in China and Japan and a study of the system in depth, see Funakoshi Taiji 船越泰次, *Tōdai ryōzeihō kenkyū* 唐代兩稅法研究 (Tokyo: Kyūko shoin, 1996). Liu A'ping 劉阿平 notes that after the Two-Tax system was implemented, the tax receipts in coins were fifteen times those of the Tianbao era, revealing that the government was able to extract more coins from its people through the new tax system. See Liu A'ping, “Tangdai feiqian chansheng de beijing ji qi yingxiang” 唐代飛錢產生的背景及其影響, *Yan'an daxue xuebao* 延安大學學報, 2006, no. 4, pp. 88–90. Despite the general consensus that the system increased the demand for coins and triggered the onset of deflation, Huang Cheng 黃成 argues that it was not the major reason for the shortage of coins. He notes that while taxes were often actually paid in goods, coins submitted for taxes soon circulated back into the market, and that the purchasing power of coins did not increase in the six to seven years after the Two-Tax system was implemented. See Huang Cheng, “Lun Tangdai fasheng qianhuang de zhuyao yuanyin” 論唐代發生錢荒的主要原因, *Hangzhou daxue xuebao* 杭州大學學報, 1989, no. 4, pp. 116–25, 154.

occurred.¹⁶⁵ This phenomenon created a heated debate from the mid-Tang period onward. Since tax payments were calculated in coins, farmers and weavers suffered great losses when their products were converted into money or when they sold them in the market. Deflation meant that the actual amount of produce to be paid for taxes increased.¹⁶⁶ Below is a chart showing how many coins a piece of silk tabby was worth in different eras, as recorded in various sources.¹⁶⁷

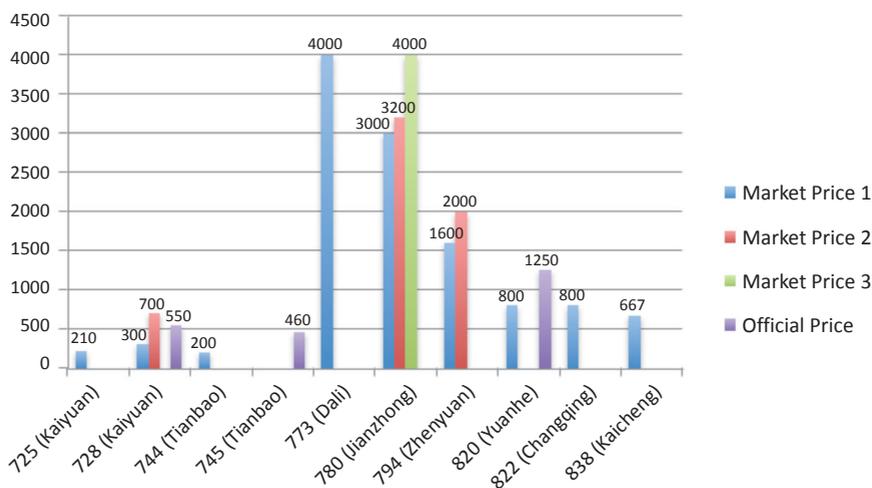
¹⁶⁵ For a discussion of this phenomenon, see Xu Hengtai 徐恆泰, “Tangdai qianhuang fasheng de shijian qiantan” 唐代錢荒發生的時間淺探, *Chenggong (jiaoyu) 成功(教育)*, 2008, no. 3, pp. 178–79. There are four major contenders for the year when the shortage of coins became severe: the twenty-second year of Kaiyuan (734), the first year of Jianzhong (780), the second year of Zhenyuan (786), and the third year of Zhenyuan (787). Xu argues that it was in the third year of Zhenyuan that the problem became serious. See also Xu Hengtai, “Tangdai qianhuang chulun” 唐代錢荒芻論 (master’s thesis, Yunnan Normal University, 2006), pp. 18–22.

¹⁶⁶ See Lu Zhi, “Junjie fushui xu baixing liutiao,” in *Lu Zhi ji, juan 22*, pp. 735–52. For a study of Lu Zhi’s comments on the defects of the Two-Tax system, see Josephine Chiu-Duke, *To Rebuild the Empire: Lu Chih’s Confucian Pragmatist Approach to the Mid-T’ang Predicament* (Albany, NY: State University of New York Press, 2000), pp. 119–29. See also Denis Twitchett, “Lu Chih (754–805): Imperial Adviser and Court Official,” in Arthur F. Wright and Denis Twitchett, eds., *Confucian Personalities* (Stanford, CA: Stanford University Press, 1962), pp. 84–122.

¹⁶⁷ The conversion rate to 210 in the year 725 was recorded in Du You 杜佑 (735–812), *Tongdian* (1988; reprint, Beijing: Zhonghua shuju, 2003), *juan 7*, p. 152. The conversion rate to 550 and the regional differences in the year 728 were recorded in Wang Pu 王溥, *Tang huiyao* 唐會要 (Beijing: Zhonghua shuju, 1955), *juan 40*, pp. 726–27. The conversion rate to 200 in the year 744 was recorded in “Shi huo zhi,” in *Xin Tang shu, juan 51*, p. 1346. The conversion rate to 460 in the year 745 was recorded in a Dunhuang manuscript calculation done for the salary of Li Jingyu 李景玉, who was vice-commissioner in the army stationed in the Western Regions. See Trombert, “The Demise of Silk on the Silk Road,” p. 327. The conversion rate to 4,000 in the year 773 was recorded in “Quan Deyu zhuan” 權德輿傳, in *Xin Tang shu, juan 165*, p. 5078. See also Quan Deyu (759–818), “Lun zaihan biao” 論災旱表, in Guo Guangwei 郭廣偉, ed., *Quan Deyu shiwen ji* 權德輿詩文集 (Shanghai: Shanghai guji chubanshe, 2008), *juan 47*, p. 750. The conversion rates to 3,300 in the year 780 and 1600 in the year 794 were based on Lu Zhi. Lu noted that one bolt of silk equalled 3,200 to 3,300 copper cash when the system was first implemented, but was worth only 1,500 to 1,600 copper cash at the time when he composed “Junjie fushui xu baixing liutiao” in 794. See Lu Zhi, “Junjie fushui xu baixing liutiao,” in *Lu Zhi ji, juan 22*, p. 725. See also *Zizhi tongjian, juan 234*, p. 7555. Historiographers likely took notice of Lu’s memorial, and thus there was a similar record of a decline of the value of a silk bolt from 3,200 copper cash to 1,600. See “Shi huo zhi,” in *Xin Tang shu, juan 52*, p. 1353. The conversion rates to 3,000 in the year 780 and to 800 in the year 822 were recorded in Han Yu, “Lun bian yanfa shiyi zhuang” 論變鹽法事宜狀, in *Han Changli wenji jiaozhu, juan 8*, p. 650 (*juan 40* in the original edition). The conversion rate to 4,000 in the year 780, 800 market

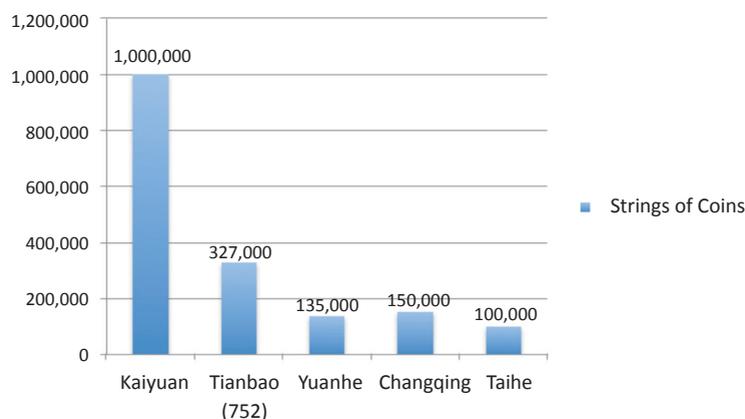
(Continued on next page)

Figure 3. Number of Coins per Silk Tabby



Below (Figure 4) is another chart that shows the general course of decline in the number of coins cast by the court in different eras.¹⁶⁸

Figure 4. Strings of Coins Cast in Different Eras



(Note 167—Continued)

rate in the year 820, and 1,250 official rate in the same year were recorded in Li Ao 李翱 (772–841), “Shu gai shuifa” 疏改稅法, in *Li Wengong ji* 李文公集 (Shanghai: Shanghai guji chubanshe, 1993), *juan* 9, pp. 45–46. The conversion rate to 667 in the year 838 was recorded in Ennin 圓仁 (794–864), *Ru Tang qiufa xunli xingji* 入唐求法巡禮行記, ed. Gu Chengfu 顧承甫 and He Quanda 何泉達 (Shanghai: Shanghai guji chubanshe, 1986), *juan* 1, p. 16.

¹⁶⁸ For the figure during the Kaiyuan era, see *Xin Tang shu*, *juan* 52, p. 1360; during the Tianbao era, see *Xin Tang shu*, *juan* 54, p. 1386; during the Yuanhe era, see *Xin Tang shu*, *juan* 54, p. 1389; during the Changqing era, see *Xin Tang shu*, *juan* 52, p. 1360; during the Taihe era, see *Xin Tang shu*, *juan* 54, p. 1390. It was noted that the number of coins cast was less than 100,000 strings. The number is rounded up to 100,000 in the table above.

During certain eras, different conversion rates were recorded, most likely reflections of regional differences, as Xu Dongsheng 徐東升 suggests.¹⁶⁹ Figure 3 reveals that inflation was still prevalent in the aftermath of the An Lushan rebellion, with a conversion rate up to 4,000 at its highest. The inflation was caused by the combined effects of the decrease in agricultural and sericultural production, due to warfare, and the monetary policy of crying up the coinage. From the year 820 through 822, the conversion rate dropped to 800, but it was still much higher than during the High Tang, when the rate was as low as 200. Figure 4 shows that the decreasing number of coins cast by the court was also responsible for the deflation. The lowest rate of conversion during the entire Tang was seen before the rebellion during Xuanzong's reign, which was also the time when the production of coins was relatively prolific. It was a peculiar phenomenon, probably caused by the abundant supply of textiles and the high quality of official coins at the time. The coinage figure for the Kaiyuan era is also questionable.¹⁷⁰

During the High Tang period, production levels were high; this indicated prosperity and was praised for leading to low prices for daily necessities. By the mid-Tang period, however, the low price levels had become a major cause for concern. This was because taxes were no longer calculated in goods, but in coins, causing agricultural producers to suffer from both higher taxes and deflation.

Part XI: The Tax System as a Monetary Policy to Increase State Income

The Two-Tax system was implemented at a time when silk tabbies had a higher exchange value than coins. It might thus seem that, after the amount to be paid was converted from coins into silk, weavers would not have to turn in as many silk tabbies as before. However, this was not the case, since the major aim of the new tax system was to increase state income. All the regulations listed in Dezong's "Ding liangshui zhao" 定兩稅詔 (Edict on the Promulgation of the Two-Tax System) point in this direction.¹⁷¹ The tax amount was predetermined in monetary terms, regardless of the actual economic situation. Different tax quotas were levied on different provinces. These quotas were based on "the year that yielded the most produce and

¹⁶⁹ See Xu Dongsheng, "Lun Tangdai wujia de jige wenti" 論唐代物價的幾個問題, *Wen shi zhe* 文史哲, 2002, no. 5, p. 136.

¹⁷⁰ Peng Xinwei mentions that each foundry could cast only 3,300 strings. He points out that it is unclear how only about seventy foundries could produce over one million strings of coins a year. See Peng, "Tangdai de huobi," chap. 4 in *Zhongguo huobi shi*, p. 256.

¹⁷¹ See "Ding liangshui zhao," in *Quan Tangwen xinbian*, juan 50, p. 629.

taxes,” primarily the fourteenth year of the Dali era (779).¹⁷² Moreover, residents and merchants alike were subject to a progressive tax based on their property. Yuan Zhen’s poem “Yinshan dao” reveals that tax quotas were divided among existing households, which means that the set quota still had to be met even when some were tax evaders. The law-abiding citizens ended up suffering even higher taxation.¹⁷³ The situation became worse when the court increased taxes by twenty percent in 782.¹⁷⁴

In order to increase state income, monetary policy required tax payment to be made in coins. Both Huang Yongnian 黃永年 and Hino Kaizaburō 日野開三郎 believe that the Two-Tax system was an attempt to reclaim some of the regional financial revenue from provincial governments.¹⁷⁵

Since the main purpose of the Two-Tax system was to secure income for the court, the wellbeing of taxpayers was not the first priority. It was not until deflation became so severe in comparison with Daizong and Dezong’s reigns that it became an issue of concern. When the Two-Tax system was promulgated, the conversion rate was based on the market rate,¹⁷⁶ around 3,000 to 4,000 bronze coins for each bolt of silk. By 794, the price had dropped so much that the number of silk bolts to be remitted for taxes had doubled, even with the same tax rate. Deflation continued

¹⁷² See Lu Zhi, “Junjie fushui xu baixing liutiao,” in *Lu Zhi ji*, *juan* 22, p. 721.

¹⁷³ See *Yuan Zhen ji*, *juan* 24, pp. 290–91.

¹⁷⁴ The proposal to increase taxes by twenty percent was made by Chen Shaoyou 陳少遊 (724–785), Military Governor of Huainan 淮南 (in modern Jiangsu). In 792, Wei Gao 韋臯 (745–805), Military Governor of Jiannan 劍南 (in modern Sichuan), also proposed increasing the tax amount by twenty percent; this was approved. See “Shi huo zhi,” in *Jiu Tang shu*, *juan* 48, p. 2093.

¹⁷⁵ See Huang Yongnian, “Lun Jianzhong yuannian shishi liangshuifa de yitu” 論建中元年實施兩稅法的意圖, in *idem*, *Tangdai shishi kaoshi* 唐代史事考釋 (Taipei: Lianjing chubanshiye gongsi, 1998), pp. 297–314. Hino Kaizaburō examined the distribution of taxes and suggested that the institution of the Two-Tax system was an economic reform intended to obtain the financial income of provincial governors. The central government gradually succeeded in doing so by decreasing the amount sent to governors and increasing the amount kept for the central government and the provinces. See Hino, “Hanchin-jidai no shūzei sanbunsei ni tsuite” 藩鎮時代の州稅三分制に就いて, *Shigaku zasshi* 65, no. 7 (July 1956), pp. 646–66. Hino argued that the Two-Tax system was instituted to control provincial governors and strengthen court power. See Hino Kaizaburō, *Tōyō shigaku ronshū* 東洋史學論集, vol. 3–4 (Tokyo: San’ichi shobō, 1980–1984). According to Li Jinxiu, although the overall taxes collected rose after the implementation of the new system, the recorded amount received by the central government increased only between 780 and 782. The amount suffered from a constant decrease after that, indicating that the government had failed in its attempt to reclaim state income from provincial governors. See Li, *Tangdai caizhengshi gao*, p. 667.

¹⁷⁶ See Xianzong’s edict “Zhi liangshuishi zhao” 置兩稅使詔, in *Quan Tangwen xinbian*, *juan* 60, p. 742.

through Muzong's reign and only came to a halt in Xuānzong's reign. It was said that two and a half bolts of silk in 780 equalled eight bolts of silk in 820. This meant that the actual tax materials to be remitted after the amount was converted from coins to silk tabbies were more than three times what they had been before.¹⁷⁷ Muzong's edict "Ling bailiao chen gebi zhao" 令百寮陳革弊詔 (To Seek the Officials' Advice on Terminating Malpractice) in 820 pointed out the dilemma he faced in choosing between cutting taxes and regulating state expenses.¹⁷⁸ Muzong eventually took the advice of Yang Yuling and ordered that taxes should be calculated in cloth, for the portions sent to the court and those retained in the provinces.¹⁷⁹ The portion sent to the military governors was still calculated in coins. Thus, by this time the court had to sacrifice its own income to keep its people's allegiance. The fact that military governors were left untouched was a clear reflection of the court's decreasing control over them.

Part XII: Circulation of Coins: Policy and the Intentions Behind It

In addition to the issuance of coins, the ban on counterfeits, and the collection of taxes in coins, the Tang court also made various regulations on the circulation of monies. These include the restrictions on the number of coins in people's possession, on the use of silk tabbies for large payments, on the practice of "short strings," and on the centralization of "flying money."

Towards the end of the Tang period, there was a stronger incentive for people to stock up on coins. This can be explained by Keynesian liquidity theory, which emphasizes the precautionary and speculative motives behind the storage of money. Fisher's quantity theory focuses on the active demand for money to perform transactions. It presumes that people will spend all they have to obtain goods and services, and that there will be no friction in the process, meaning that people can always get what they want, any time and anywhere. In reality, however, these presumptions are not true. Economists have already pointed out that the demand for money should be treated separately from the demand for goods. This is because money carries liquidity and is universally acceptable as a means of exchange. These characteristics lead people to hold on to money, which increases the demand for it, to more than the actual amount needed for exchange. Money is a good way to store value for emergency and for investment, which are the precautionary and speculative motives proposed by Keynes.

¹⁷⁷ See "Shi huo zhi," in *Xin Tang shu*, *juan* 52, p. 1360.

¹⁷⁸ See Muzong's edict "Ling bailiao chen gebi zhao," in *Quan Tangwen xinbian*, *juan* 65, p. 803.

¹⁷⁹ See *Zizhi tongjian*, *juan* 243, pp. 7799–7800.

The stockpiling of coins so popular in the late Tang period clearly demonstrates these motives. Quite a few excavations have found large collections of Tang coins in pitchers buried underground. One such hoard discovered in Shijiazhuang, Hebei province, had 48,905 coins weighing up to 187.5 kg, with 48,899 *kaiyuan tongbao*; the remaining six were *Qianyuan zhongbao* coins.¹⁸⁰ Since there are 11,053 *kaiyuan tongbao* coins with a longer first stroke of *yuan* 元, and 15,806 with a crescent moon on the back, the earliest burial date of the hoard was likely the mid-Tang period. Another hoard in Anyang had coins that weighed 171 kg in total. It was believed to have been buried in Xiangzhou 相州 (covering parts of modern Hebei and Henan) when the rebel An Qingxu was besieged by the military governors of nine circuits of the Tang court.¹⁸¹ Still another hoard in Xianyang had over thirty catties of coins cast in the mid- and late Tang.¹⁸² Farther away, in Horing County in Hohhot, a hoard was discovered that contained 67,000 *kaiyuan tongbao* coins, two *Qianfeng quanbao*, 165 *Qianyuan zhongbao*, and 65 *Dali yuanbao*. They were buried no later than the Jianzhong era of the Tang dynasty. The authors suggest that the rich buried the coins as a precaution, and that it might also have been to avoid forcible loans, taxes, or plunder at times of unrest.¹⁸³ Another hoard, discovered in Chengdu (Yizhou in Tang times) in 1977, had 561 *kaiyuan tongbao*, 2 *Huichang kaiyuan*, and 16 *Qianyuan zhongbao*; it is believed to have been buried by the late Tang period.¹⁸⁴

The political instability of the mid- and late Tang periods certainly encouraged people to stock up on coins. The forcible collection of so-called taxes in 762 was no different from bandits plundering. At the time, Yuan Zai 元載 (d. 777), who was Taxation Commissioner 租庸使, levied heavy taxes in the Huai and Yangtze River valleys to compensate for the eight years of taxes owed by taxpayers in the other circuits. He did not pursue the tax evaders elsewhere, nor collect taxes based on proper calculation. Taxes were basically collected based on whether property was detected. Once a hoard of millet and silk tabbies was known, up to eighty percent or ninety percent might be taken by District Magistrates. Those who complained were

¹⁸⁰ See Li Shengwu 李勝伍, “Shijiazhuang shijiao faxian Tangdai jiaocang qianbi” 石家莊市郊發現唐代窖藏錢幣, *Kaogu* 考古, 1985, no. 4, p. 382.

¹⁸¹ See Wang Yiyin 王義印 and Wan Hongrui 萬洪瑞, “Anyang chutu Tangdai jiaocang qianbi yanjiu” 安陽出土唐代窖藏錢幣研究, *Zhongyuan wenwu* 中原文物, 1998, no. 4, pp. 73–79.

¹⁸² See Liu Changsheng 劉長勝, “Xianyang chutu de Tangdai qianbi” 咸陽出土的唐代錢幣, *Shaanxi jinrong*, 1995, no. 9, p. 67.

¹⁸³ See Zhao Ai’jun 趙愛軍, Xiao Zhihua 肖志華, and Tan Zhijun 譚稚軍, “Helin ge’er Tangdai jiaocang qianbi” 和林格爾唐代窖藏錢幣, *Neimenggu jinrong yanjiu* 內蒙古金融研究, 2003, no. S4, pp. 41–47.

¹⁸⁴ See Li Enxiong 李恩雄, “Chengdushi faxian jiaocang Tangdai qianbi” 成都市發現窖藏唐代錢幣, *Kaogu*, 1983, no. 6, p. 571.

threatened with severe punishment. As result, anyone with more than ten bushels of grain was afraid. They either resignedly awaited the arrival of tax collectors or used mountains and rivers as natural shields to resist the government. The forcible collection of taxes was known as *baizhuo* 白著 (exaction).¹⁸⁵ Since inflation was severe at the time, coins were not as desirable as before. When deflation set in, however, coins became an ideal means to prevent wealth from being detected by the government. In fact, most of the hoards excavated in modern times were buried in the mid- or late Tang period.

Additionally, coins were highly sought after because of their value both as money and as metal. People expected their value to rise, which made them even more eager to keep them. A preliminary attempt by Miyake Toshihiko 三宅俊彦 to quantify the archaeological evidence showed that *kaiyuan tongbao* comprised almost 98% of the Tang coins found in Tang and Five Dynasties hoards, while *Qianyuan zhongbao* and *Huichang kaiyuan* amounted to slightly over 1% each.¹⁸⁶ One reason for this was the large production of *kaiyuan tongbao* throughout the Tang dynasty in comparison with that of other coins. Another reason was likely Gresham's law. The standard *Kaiyuan tongbao* were the most desired throughout the Tang dynasty. It is only natural that people chose to stock up on them, using the less desirable ones for circulation. Although *Qianyuan zhongbao* contained more copper, their inflated value made them undesirable. When their exchange value with *kaiyuan tongbao* fell, they were recast into smaller coins. As for *Huichang kaiyuan*, they were made with inferior craftsmanship and scrap metals, which again made them undesirable. They were also melted to cast Buddhist articles when Xuānzong ascended the throne.

It was during Xianzong's reign that clear regulations were imposed to ban storage of large amounts of coins. In the sixth month of the third year of Zhenyuan (808), Xianzong stated his determination to ban the hoarding of coins, especially by merchants. The edict "Jin caiyin kenghu ling caitong zhuzhu zhao" noted that merchants would be required to trade in their coins for products once a one-year grace period had passed.¹⁸⁷

Later, Xianzong issued the edict "Jin sizhu xianqian chi" 禁私貯見錢敕 (To Ban the Private Storage of Coins), which forbade the storage of more than 5,000 strings of bronze coins. Those in possession of more were to spend them within a month. If the quantity was truly too large, they could apply for a one-month extension. Offenders who were commoners were to be slashed to death, while officials would be severely

¹⁸⁵ See *Zizhi tongjian*, *juan* 222, p. 7119.

¹⁸⁶ See Miyake Toshihiko, *Chūgoku no umerareta senka* 中国の埋められた銭貨 (Tokyo: Dōseisha, 2005), p. 10, table 2.

¹⁸⁷ The year was added based on "Shi huo zhi," in *Jiu Tang shu*, *juan* 48, pp. 2101–2.

fined and demoted. All the excess coins were to be confiscated. One-fifth of the confiscated coins, to a maximum of 5,000 strings, would be awarded to those who reported the crime.¹⁸⁸

At the time, military governors were hoarding vast quantities of coins. Wang E 王鏐 (740–815), Han Hong 韓弘 (765–823), and Li Weijian 李惟簡 (764–818) all had more than 500,000 strings. When this edict was announced, they all rushed to purchase houses. However, rich merchants were able to bribe the Army of Divine Strategy, the court army, and claim that their coins belonged to the army, so as to avoid further investigation.

In 830, the court again reinforced its regulation forbidding the keeping of coins. Those who had 10,000 to 100,000 strings were to trade them for other forms of property within a year, and those who had 100,000 to 200,000 were to trade them within two years. Offenders were liable to be reported. One-fifth of the coins confiscated would be used to reward any informer, up to a maximum of 5,000 strings.¹⁸⁹ However, this edict proved impossible to implement.

The large-scale stockpiling of coins from the time of Xianzong onwards reveals that they were functioning as a medium of exchange, as a form of investment, and as a store of value. In fact, there was already pressure for monetarism during Xuanzong's reign. The edict "Ling qianhuo jianyong zhi" 令錢貨兼用制 (On the Concurrent Use of Coins and Goods) emphasized the acceptability of commodity monies, mainly in the form of textiles. It was illegal to accept only coins for exchange.¹⁹⁰ Since provincial governors often refused to accept goods for tax payments, Xuanzong issued "Jin zike shuihu zhengna xianqian chi" 禁資課稅戶徵納見錢敕 (Forbidding the Forcible Collection of Wealth Tax Payments in Coins). He noted that tax payments were specified in coins only because they were an easy way to measure value. For actual payment, goods could be accepted. Thus, taxpayers would not have to sell their textiles and farm produce when the market price was low.¹⁹¹ In 811, Xuanzong issued the edict "Ming qianwu jianyong chi" 命錢物兼用敕 (On the Concurrent Use of Coins and Goods). All transactions concerning houses and horses were to be made in textiles first. Other transactions of over ten strings of coins must be paid in combination with silk tabbies.¹⁹² This policy was implemented to reduce the demand for bronze coins. In 813, deflation persisted. The court had to spend 500,000 strings

¹⁸⁸ See Xianzong's edict "Jin sizhu xianqian chi," in *Quan Tangwen xinbian*, juan 62, p. 763.

¹⁸⁹ See Wang Pu, *Tang huiyao*, juan 89, p. 1633. The same edict was entitled "Jiugao sizhu xuji xianqian chi" 糾告私貯蓄積現錢敕, in *Quan Tangwen xinbian*, juan 74, p. 903.

¹⁹⁰ See Xuanzong's edict "Ling qianhuo jianyong zhi," in *Quan Tangwen xinbian*, juan 25, p. 321.

¹⁹¹ See Xuanzong's edict "Jin zike shuihu zhengna xianqian chi," in *Quan Tangwen xinbian*, juan 35, p. 427.

¹⁹² See Xuanzong's edict "Ming qianwu jianyong chi," in *Quan Tangwen xinbian*, juan 35, p. 427.

of coins to purchase silk tabbies at a ten percent increase over the market price. In his twelfth year as ruler (817), Xianzong commanded that another 500,000 strings of coins be spent to purchase silk tabbies at the market price.¹⁹³ In the sixth year of the Huichang era (846), during Wuzong's reign, salaries of civil servants began to be paid in equal proportions of bronze coins and silk tabbies. The court reinforced its ban on the use of lead and tin coins, but the problem remained unsolved.

These policies showed the determination of the court to increase the money supply. However, the policies targeting the market practice of counting short of a hundred, known as *duanbai* 短陌 or *shengbai* 省陌, or Hundred as Determined by the Department of State Affairs (if approved by the court),¹⁹⁴ and the system of “flying money” reveal something more complicated. Both the practice and the system were initiated in the market during the mid-Tang period and could have helped to relieve the demand for money. However, the court approved of these practices only when they were under its control.

During the Tang period, a thousand coins strung together was called *min* 緡 or *guan* 貫, translated as a “string of coins.” In market transactions, there were cases in which a string that did not have enough coins was still accepted as a full string. Although “short strings” appeared as early as the Southern Dynasties, it was during the eighth century that this practice attracted the attention of the Tang court. In the ninth year of Zhenyuan (793), Dezong issued the edict “Jin qian baiqian chi” 禁欠陌錢敕 (To Ban Short Counting of a Hundred Coins), in which he made the short count illegal and allowed recipients to prosecute.¹⁹⁵ This indicates that the practice was originally regarded as a form of cheating. In the fourth year of Yuanhe (809), Xianzong reinstated the illegality of counting twenty short of a string. Offenders were to be slashed twenty times. The offence was the same as that of possessing lead and tin coins.¹⁹⁶ By 819, however, both the practices of short counting and the use of lead and tin coins were prevalent.

¹⁹³ See Xianzong's edict “Ping quanhuo chi” 平泉貨敕, in *Quan Tangwen xinbian*, *juan* 62, p. 763.

¹⁹⁴ The Chinese character 陌 here is normally read as *mo*, but in this context it is used as a loan word for *bai* 佰, meaning a hundred. Although it is common for the terms to be transliterated as *duanmo* and *shengmo*, I prefer to use *duanbai* and *shengbai* so that the meanings of the terms are clear. For a study of the terms, their origin and development, and their nature, see Chen Mingguang 陳明光, “‘Duanbai’ yu ‘shengbai’ guanjian” 「短陌」與「省陌」管見, *Zhongguo jingjishi yanjiu*, 2007, no. 1, pp. 169–73. Chen agrees with Cheng Minsheng 程民生 that the *sheng* 省 in *shengbai* refers to the central government. He further suggests that it refers to the Department of State Affairs.

¹⁹⁵ See Dezong's edict “Jin qian baiqian chi,” in *Quan Tangwen xinbian*, *juan* 54, p. 668.

¹⁹⁶ See “Jin qianqian chi” 禁鉛錫錢敕, in *Quan Tangwen xinbian*, *juan* 62, p. 766.

Despite the court's efforts to ban short counting, it remained active in the marketplace. Both Kuroda Akinobu and Chen Mingguang 陳明光 note that this practice was welcomed by the populace. Akinobu believed that *shengbai* was implemented in larger transactions, when coins were counted collectively in strings.¹⁹⁷ Chen argued that the practice was made possible because bronze coins had a higher intrinsic value than their face value; thus, people were willing to accept strings of coins with fewer coins than standard.¹⁹⁸

In fact, even Xianzong had used this practice to create income for the state. However, it was referred to as *dianbai* 墊陌 or *chubai* 除陌 when adopted by the court. In 816, when he sent armies from seven circuits to suppress the rebellious military governors Wu Yuanji 吳元濟 (783–817) and Wang Chengzong 王承宗 (d. 820), the court was under great financial stress. It was during this time that Huangfu Bo 皇甫鎛, an official often chastised for his extreme fundraising methods, became a favourite. He proposed that each string of a thousand coins should be counted twenty short for court expenses. An additional fifty should be taken out for military provisions.¹⁹⁹

As the practice became very popular and the court had no better way to increase the money supply, it was finally legalized when Muzong came to the throne. In the first year of the Changqing 長慶 era (821), Muzong issued the edict “Ding qianbai chi” 定錢陌敕 (Rules on Counting Short of a Hundred), making it legal for each string of a thousand coins to be eighty coins short. With this concession, Muzong noted that there must be no further deductions in market transactions.²⁰⁰

The court's reluctance to approve the practice until it could no longer be suppressed clearly showed its intention to control the monetary market. When short counting was made legal, the court sought to benefit from it as well. For instance, Muzong followed the example of Xianzong and used this practice to create state income. His edict “Ling neiwaiguan liangchou baiqian zhao” 令內外官量抽陌錢詔 (Commanding Officials to Count Short of a Hundred) ordered an extra fifty coins to be taken out from a string to meet state expenses for a year or two until the state treasury was replenished. This was done in addition to the regular practice of counting short of a hundred. Even salaries for various literati officials in the capital were

¹⁹⁷ See Kuroda, *Kahei shisutemu no sekaishi zōho shinban*, pp. 96–104.

¹⁹⁸ See Chen Mingguang, “‘Duanbai’ yu ‘shengbai’ guanjian,” pp. 169–73. Although scholars have different opinions concerning the reasons behind this practice, it did alleviate the demand for coins. For a review of the scholarship on this practice, see He Ping 何平 and Lin Lin 林琳, “Zhongguo gudai tongzhubi liutong lingyu ‘duanbai’ xianxiang de qi yuan ji qi xingzhi yanjiu” 中國古代銅鑄幣流通領域「短陌」現象的起源及其性質研究, *Zhongguo jingjishi yanjiu*, 2013, no. 1, pp. 10–22, 175.

¹⁹⁹ See “Shi huo zhi,” in *Xin Tang shu*, *juan* 54, p. 1389.

²⁰⁰ See Muzong's edict “Ding qianbai chi,” in *Quan Tangwen xinbian*, *juan* 66, p. 810.

subject to this reduction. Military officials were exempted; the reason given was that their salaries were meagre enough already.²⁰¹ Although Muzong did not specify the precise amount to be counted short in regular practice, it was probably twenty. This policy proved to be discouraging for the bureaucrats' morale. Muzong eventually issued another edict, noting that the reduction of fifty coins for each string should be disregarded when settling official salaries.²⁰²

For other court expenses, however, the amount counted short was up to 200 per string in wartime, which was probably *circa* 821, when Wang Tingcou 王廷湊 (d. 834)²⁰³ declared himself to be the Military Governor of Chengde 成德 (in modern Hebei) and joined forces with Zhu Kerong 朱克融²⁰⁴ (d. 826), Military Governor of Youzhou, to besiege Niu Yuanyi 牛元翼²⁰⁵ (*fl.* 821), Military Governor of the Eastern Circuit of Shannan 山南東道節度使 in Shenzhou 深州 (in modern Hebei). This can be seen in Muzong's edict "Ming zhudao liushi qian jianguan chi" 命諸道留使錢減貫敕 (Ordering the Tax Receipts for Military Governors to be Counted Short for a String), which reveals the court's inability to increase tax amounts in order to suppress the rebels. Muzong commanded that two hundred coins should be taken out from each string of tax payments that were sent to military governors. This was said to be a temporary measure and would be terminated once the rebels were subdued.²⁰⁶

²⁰¹ See Muzong's edict "Ling neiwaiguan liangchou baiqian zhao," in *Quan Tangwen xinbian*, *juan* 65, pp. 802–3.

²⁰² See Muzong's edict "Ting chou fengqian chi" 停抽俸錢敕, in *Quan Tangwen xinbian*, *juan* 66, p. 809.

²⁰³ Wang Tingcou was also known as Wang Tingcou 王庭湊, with a different Chinese character for *ting*. He was a Uighur serving at Chengde. In 821, he killed the Military Governor Tian Hongzheng 田弘正 (746–821) and his men, declaring himself to be Tian's successor. Muzong sent an expedition against him to no avail, and was therefore forced to appoint him Military Governor of Chengde. See "Wang Tingcou zhuan" 王廷湊傳, in *Jiu Tang shu*, *juan* 142, pp. 3884–88; *Xin Tang shu*, *juan* 211, pp. 5959–61.

²⁰⁴ Zhu Kerong was the grandson of Zhu Tao 朱滔 (746–785), the rebel who had declared himself the Prince of Ji 冀王 in 782.

²⁰⁵ Niu Yuanyi was appointed Military Governor of Shenzhou and Jizhou 冀州 (in modern Hebei) and was later appointed Military Governor of the Eastern Circuit of Shannan 山南東道節度使. In order to receive the new appointment, he escaped Wang's siege and headed to the capital. Wang seized this opportunity to enter Shenzhou, killed Niu's subordinates, 180 men, and held Niu's family hostage. Niu died, it is said, of anger when he heard of this, and Wang subsequently killed his entire family. See "Wang Tingcou zhuan," in *Jiu Tang shu*, *juan* 142, p. 3887; "Niu Yuanyi zhuan" 牛元翼傳, in *Xin Tang shu*, *juan* 148, pp. 4788–89.

²⁰⁶ See Muzong's edict "Ming zhudao liushi qian jianguan chi," in *Quan Tangwen xinbian*, *juan* 66, p. 810.

“Flying money” was a kind of money-substitute similar to promissory notes or bills of credit. It allowed merchants to cash in and out at different places without having to carry all the coins with them. Its earliest appearance was in the eighth century. At the beginning, the service was mainly run by regional officials and rich tea merchants.²⁰⁷ Later, it was also run by regional governments. Each circuit, the administrative unit of a region in Tang times, had a Capital Liaison Office 進奏院 in Chang’an that was responsible for receiving state payments and official reports from its region. Instead of transporting money from regions to the capital, the Capital Liaison Office could accept money deposits from merchants and allowed them to cash out in the respective region. This way, not only could transportation costs be saved, but also the total amount of coins in circulation would rise. Flying money increased the money supply in the sense that it was not necessary to hold as much money in reserve. Moreover, it saved transportation costs and had the benefit of deferred payment: since it took some time for merchants to commute to their destinations, where they cashed out their deposits, the money kept by the related parties could be partially lent out for interest, or spent to meet immediate needs. Money in circulation thus increased. The system had an effect similar to the multiplier process discussed in money and banking. Scholars generally agree that flying money pioneered the appearance of paper money in China,²⁰⁸ but in operation, it was closer to today’s money order.

²⁰⁷ See Xia Limei 夏麗梅, “Shilun Tangdai feiqian de chansheng ji xingzhi” 試論唐代飛錢的產生及性質, *Qinghai shehui kexue* 青海社會科學, 2004, no. 6, pp. 100–103. Li Jiashou 李家壽 differs from Xia, saying that the rich merchants who began to operate the system of flying money were only following the example of the regional and central governments. See Li Jiashou, “Guanyu Tangdai ‘fei qian’ de xingzhi wenti” 關於唐代「飛錢」的性質問題, *Caijing yanjiu* 財經研究, 1994, no. 3, p. 62.

²⁰⁸ Richard von Glahn notes that a variety of paper monies was already used in the Song dynasty. The Southern Song government issued paper money to alleviate the impact of its deficit spending after the loss of North China to Jurchen invaders in 1127. By the turn of the thirteenth century, paper money and silver had become indispensable fixtures in state finance. For a scholarly discussion of the emergence of paper money, see von Glahn, “Transition to the Silver Economy, 1000–1435,” chap. 4 in *Fountain of Fortune*, pp. 48–82. There are various faulty claims as to when paper money first appeared. Li Jiashou noted that the Koreans mistakenly equated flying money with paper money. Similarly, Eduard Kann said that paper money first appeared in the Tang dynasty. Kann even included a photograph of paper money known as “Da Tang baochao” 大唐寶鈔 as evidence, which as Peng remarks is spurious. He points to the inscription, which states that anyone who informs on counterfeiters will be awarded 750 taels of silver. Peng observes that silver was not used as currency in Tang times, and the term *baochao* did not appear even in the Song dynasty, much less in the Tang. Li Jiashou notes that the earliest paper money was the *jiaozhi* 交子 of the Song dynasty. See Li, “Guanyu Tangdai
(Continued on next page)

Despite the benefits, the court publicly banned the use of flying money in 806 and 811. It is likely that the court was intent on controlling the market. The shortage of bronze coins thus worsened, as merchants had to stock up on them to do business. This reduced the number of coins in circulation and created more friction in business transactions, causing the prices of products to rise. The preference in the capital for payment in hard currency also played a role. Liu A'ping 劉阿平 suggests that the court banned flying money because it received no financial benefit from its use.²⁰⁹

In 812, Wang Shao 王紹 (743–814), Lu Tan 盧坦 (749–817), and Wang Bo 王播 (759–830) suggested reviving the system of flying money through the three fiscal agencies, namely the Census Bureau, the Tax Bureau, and the Salt and Iron Monopoly Bureau.²¹⁰ In 813, the court revived it, with the condition that deposits had to be made through the three fiscal agencies. Scholars have observed that there was a competition for bronze coins between the regions and the court.²¹¹ This is supported by the fact that the court attempted to impose a ten percent service charge. The charge was waived later on when no one was willing to use the service.

The bans on hoarding and the requirement that payment with textiles, as well as with coins, must be allowed were efforts to increase the money supply; it was also hoped that this would ease the problem of counterfeit coins. These policies reveal the court's attempts to regain control of the monetary market. The court's shifting policy on "short strings" and "flying money" also reveal its efforts to combat market forces so as to preserve state authority. When these efforts failed, it tried to benefit from

(Note 208—*Continued*)

'fei qian' de xingzhi wenti," pp. 62–63. Some scholars argue that the *guifang* 櫃坊 (storage counter) was a financial institution similar to today's banks. Qin Hui 秦暉 disagrees. He points out that the *guifang* simply provided the service of storing people's belongings. *Guifang* appeared in response to the geographical confinement of the marketplace and the limitation on business hours. See Qin Hui, "Tangdai guifang wei 'jinrong jigou' shuo zhiyi: Jianlun fengjian houqi jinrong shichang de xingcheng jizhi wenti" 唐代櫃坊為「金融機構」說質疑：兼論封建後期金融市場的形成機制問題, *Shaanxi shida xuebao* 陝西師大學報, 1990, no. 2, pp. 63–73.

²⁰⁹ See Liu A'ping, "Tangdai feiqian chansheng de beijing ji qi yingxiang," pp. 88–90.

²¹⁰ According to Hucker, the three fiscal agencies were the three vital fiscal organs of the central government, and eventually came to be considered a single, consolidated agency. The pattern emerged in the latter half of Tang, not later than 818, and persisted through the first Song century to *circa* 1080, when responsibility for fiscal affairs was finally restored to more traditional agencies, principally the Ministry of Revenue. See Hucker, *A Dictionary of Official Titles in Imperial China*, p. 364.

²¹¹ See Hu Rulei 胡如雷, "Tangdai de feiqian" 唐代的飛錢, in idem, *Sui Tang Wudai shehui jingji shi lun gao* 隋唐五代社會經濟史論稿 (Beijing: Zhongguo shehui kexue chubanshe, 1996), pp. 173–77.

market practices, using short counting itself, and trying to profit from the “flying money system” through a service charge.

Part XIII: Conclusion

A review of the Tang monetary system and policy makes it plain that the intent of the court was to control the monetary market. In the early stage of Tang rule, its major aim was to establish sovereign power, and to fund state expenses during times of military upheavals. This review draws evidence from various sources, including numismatics, archaeology, economic and political history, and modern economics. The historical accounts in the two official histories of the Tang were checked against other sources, such as archaeological and numismatic findings, as well as against existing literature such as the Tang emperors’ edicts and the *Zizhi tongjian*. Discrepancies and errors in the existing literature have been rectified. In analysing economic phenomena, modern theories are referenced when appropriate.

The issuance of standard full-bodied coins was a symbol of the court’s financial and political power, to be maintained as long the court could still afford it. The anti-counterfeiting policy throughout the dynasty, the ban on the hoarding of coins, and the strict regulations on the acceptance of silk tabbies along with coins were all implemented to combat market forces. Counterfeit coins challenged state authority, while the hoarding of coins and the preference for payment in coins created extra burdens on the official coinage. As its political and economic power began to wane, the court had to explore ways to fund state expenditures through various monetary measures. These included crying up the coinage, levying tax payments in coins, accepting short counting, and centralizing the use of “flying money.” One interesting finding is that Suzong already had coinage in mind as a form of indirect taxation when he issued the *Qianyuan zhongbao* coins in order to avoid levying more taxes. It echoes Milton Friedman’s idea that the printing of money is a form of indirect taxation, because the increase in money supply dilutes the purchasing power of the wealth possessed by the people.

This research has exposed the complexity of the Tang monetary system, which involved both commodity and metal monies. The study considers many issues, including the purposes and effects of the types of coins issued, the measures taken to ban counterfeit coins and their effects, the debate on private coinage, and the diverse methods that were tried to increase the supply, as well as the practice of “short strings” and the system of “flying money.” It also analyses the oddities of Liu Zhi’s arguments and the reasons for the shortage of coins.

This research also proposes an answer to the peculiar phenomenon that a ban on counterfeit coins resulted in inflation, which seems to go against the economic

theories concerning the relation between price level and the money supply. However, a detailed analysis shows that the situation occurred because the presumption of a closed economy was invalid at the time.

Hartwell noted that all factions in the various financial debates of the Tang and Northern Song favoured measures designed to bring about stability or a slight secular increase in commodity prices. There was a continued dominance of the standpoint that the aim of proper monetary policy should be either stability or a secular rise in agricultural prices. This is consistently reflected in the sources of Tang and Northern Song economic history.²¹² This study indicates that the major priorities of the monetary policy in Tang China were *de facto* the preservation of state authority and the security of state income.

While the Tang house successfully established its state authority through casting full-bodied coins, it failed miserably in maintaining it, due to the high cost of coin production and the rapid expansion of business activity. Despite its many efforts to suppress private casting, the court tried in vain to defeat market forces. When the administration capitulated and tried to cry up the coinage, however, it could not back up the coins with the economic power of the ruler. Instead, it ended up agitating the market due to its tenfold overvaluation of the coinage, in addition to coin debasement, as in the case of *Qianfeng quanbao*. Perhaps Empress Wu recognized this dilemma, as she did not issue new coins when she announced the founding of her Zhou dynasty. The emergence of “flying money” and the frequent practice of “short strings” in the latter half of the dynasty demonstrate that there was pressure for the emergence of fiat money. It is only natural that “flying money” is considered the predecessor of paper money.

As for the security of state income, the court successfully managed to increase state reserves by specifying that taxes must be calculated in coins. It also managed to increase state expenditures through crying up the coinage and casting large-denomination coins. Crying up the coinage created hyperinflation and worsened the counterfeiting problem, but it was a desperate tactic of the court in times of military unrest. This policy was positive because it tided the court over a difficult period. Specifying that taxes must be paid in coins, however, had become a source of serious social problems by 794. The severe shortage of coins caused the price of silk tabbies and other goods to drop, resulting in an increase in tax payments, which were calculated in coins but paid in goods.

In sum, the Tang court demonstrates the damage caused by a shortfall in the money supply. So long as a monetary system still has commodity or metal monies as

²¹² See Hartwell, “Classical Chinese Monetary Analysis and Economic Policy in T’ang-Northern Sung China,” pp. 70–81.

its principle means of exchange, constraints in the money supply will limit the growth of the economy. Moreover, commodities or metals used in monies can be subject to severe shortages, while at the same time they cannot be fully utilized elsewhere. The pressure for monetarism posed many questions for the imperial government of Tang China. The impetus toward fiat money was already emerging.

Monetary Policy as Key to State Authority and Income in Tang China

(Abstract)

Tan Mei Ah

This research paper discusses the intrinsic problems associated with the Tang's multi-currency system and analyses its various monetary measures, which the author argues were implemented to preserve the authority of the sovereign, by issuing full-bodied *kaiyuan tongbao* coins before the An Lushan rebellion that broke out in 755, and to increase state income, mainly through crying up the coinage by issuing Qianyuan coins, as a form of indirect taxation during the rebellion. The monetary measures discussed include the issuance of various types of coins in different periods, the anti-counterfeiting measures and the reasons, including the shortage of coins, that led to counterfeiting; the debate on private casting of coinage; and the regulations on the circulation of monies. To be specific, these regulations concerned the use of bronze coins as a uniform unit for state payment under the progressive Two-Tax system; the operation of "flying money"; and the practice of "counting short" of a hundred. Additionally, this paper analyses the effects of these monetary policies on the Tang economy and society, and their significance in Chinese history. It takes a multi-disciplinary approach, using modern economic theories to inspect Liu Zhi's illogical claim concerning the relation between money supply and price level, as well as to analyse the inflation caused by a ban on counterfeit coins, and to discuss the large number of coin hoards in the mid- and late Tang. Numismatic and archaeological evidence is provided to explain certain phenomena.

Keywords: Tang economy multi-currency system monetary policy
counterfeiting *kaiyuan tongbao*

從皇權與收入探討唐代貨幣政策

(提要)

陳美亞

本文探討唐代錢帛兼行之貨幣供應問題及貨幣政策，提出皇權與收入是唐室的主要考量。安史之亂前，朝廷鑄造足值貨幣開元通寶以確立及維護皇權，更有成本高於面值者。安史之亂爆發，肅宗採第五琦建議，鑄造大錢乾元重寶及重輪錢以資軍用，所發行之虛錢無異於間接稅收，而皇權受損。文中所論遍及各種錢幣之鑄造、禁盜鑄政策及盜鑄盛行之原因、允許私鑄之廷議，以及控制錢幣流通之措施，如以錢計稅、飛錢和省陌等。文章兼論各項政策對唐代社會經濟乃至後世之影響。研究採跨學科角度，借用現代經濟學原理，分析劉秩「錢輕由乎物多」之謬誤、禁盜鑄錢所引起之「市井不通，物價騰起」現象，以及中晚唐之大量窖藏，兼採錢幣學與考古學成果證成若干論點。

關鍵詞： 唐代經濟 錢帛兼行 貨幣政策 盜鑄 開元通寶