

### ***Chapter Three: The Question Of Eighteenth-Century Inflation***

To make an accurate report on the long-distance grain trade in the eighteenth century, it is necessary to study permutations in money, and therefore in the market worth of grain, during that time. Grain prices are not merely a matter of supply and demand; they also are affected by fluctuations in the value of money.

The monetary system of early and high Qing (1644-1800) was a bimetallic system of copper cash and silver. Copper coins, cast by the state, were used mainly in local markets for small transactions, while silver ingots or coins were imported from foreign countries, and used mostly in large-scale transactions and inter-provincial trade. In this chapter, I shall discuss how these two kinds of money affected the price of rice.

#### ***Copper Prices***

In Qing China, the use of copper cash was characterized by regional diversities. When people used cash in large units, they put a string through the holes in the coins. This larger unit of cash was called a "string" (*chuan*). A string varied in size (i.e., number of coins) and value according to the custom of a given market. Even if two regional markets used the same number of coins in their string, their strings might differ in the types of coins used. Strings were composed of some legitimate coins from the state, some illegal coins from private mints, and even some ex-coins from previous dynasties; in different markets, the percentage of that composition also differed. The diversity of the string system increased the difficulty of understanding the money economy in the Qing.<sup>1</sup>

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<sup>1</sup> For this reason, Endymion Porter Wilkinson stressed that when using cash to indicate price level, one has to be clear about the local habit of cash circulation. See Endymion Porter Wilkinson, *Studies in Chinese Price History* (New York and London: Garland Publishing, Inc., 1980), pp. 15-6. For more details of copper cash in the Qing, see Peng Xinwei,

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Despite these variations, historians have agreed that China witnessed a rise of commodity prices quoted in copper cash in the late eighteenth century.<sup>2</sup> Their explanations as to why this happened, however, are not so unified. Chen Zhaonan, for instance, attributed the phenomenon to an over-supply of copper cash, and a fall in the demand for it, caused by the use of silver coins and merchant bills instead.<sup>3</sup> Adachi Keiji, while unopposed to the idea of inflation, objected to the notion that silver predominated in market activities. He argued that the role of copper cash as the major means of exchange was never challenged in rural markets. In addition, he stated that the rapid development of market activities in rural areas increased the demand for copper cash in the second half of the eighteenth century.<sup>4</sup> Building on Adachi's study, Akinobu Kuroda has showed that the Qing government, suffering from reduced domestic copper output and a surge in copper prices, failed to issue enough cash to satisfy the market need. As a result, debased coins from illegal mints were used to meet the demand. Local officials, desperate to meet coin production quotas, also issued debased coins. The value of copper cash then plummeted, pushing commodity prices up.<sup>5</sup>

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*Zhongguo huobi shi* (Shanghai: Shanghai renmin chubanshe, 1958), pp. 14-7; tr. as *A Monetary History of China*, tr. Edward Kaplan (Bellingham, WA: Western Washington University, 1994). With regard to the political theory behind copper cash, see Richard Von Glahn, *Fountain of Fortune: Money and Monetary Policy in China, 1000-1700* (Berkeley, CA: University of California Press, 1996), pp. 15-47.

<sup>2</sup> See Peng, *Zhongguo huobi shi*, p. 824; Wilkinson, *Studies in Chinese Price History*, p. 32; Chen Zhaonan, *Yongzheng Qianlong nianjian de yinqian bijia biandong (1723-95)* (Taipei: Zhongguo xueshu zhuzuo jiangzhu weiyuanhui, 1966), pp. 12-7; Hans Ulrich Vogel, "Chinese Central Monetary Policy, 1644-1800," *Late Imperial China*, 8, no. 2 (Dec. 1987), p. 7.

<sup>3</sup> Chen, *Yongzheng Qianlong nianjian de yinqian bijia biandong*, pp. 48-54.

<sup>4</sup> Adachi Keiji, "Min Shin jidai ni okeru senkeizai no hatten," in *Chūgoku sensei kokka to shakai tōgō*, ed. Chūgokushi kenkyūkai (Kyoto: Bunrikaku, 1990), pp. 387-412.

<sup>5</sup> Kuroda Akinobu, *Chuka teikoku no kozo no sekaikeizai* (Nagoya: Nagoya University Press, 1994), pp. 50-3.

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The inflation caused by the debasement of copper cash occurred in the lower Yangzi region in the last decade of the century. In 1791, so that the value of copper cash would not affect the income of soldiers in Jiangsu province, the Qianlong emperor allowed the Jiangsu Governor to pay the soldiers silver instead. At the same time, he allowed a temporary closing of the copper mint in the province, to elevate the value of copper cash.<sup>6</sup>

We have little data to show the trend of rice prices in the region at the time. A short paragraph, entitled “rice prices” (*mijia*), in the book *Lüyuan Conghua* (Miscellaneous words in the Lü Garden) is commonly cited.<sup>7</sup> It reads:

In Qianlong 20 (1755), a plague of locusts stripped the four prefectures [of Suzhou, Songjiang, Changzhou, and Zhenjiang] [of vegetation] and caused famine. [As a result,] the price of rice rose to 35-36 cash and cases of death from hunger were numerous. Thereafter, bumper harvests occurred in successive years and the price gradually returned to normal: only 14-15 cash for a *sheng*<sup>8</sup> [of rice] as the usual price. When the drought occurred in Qianlong 50 (1785), each *sheng* of rice rose to 56-57 cash. From then on, no matter whether the harvest was good or bad, the usual price was between 27-28 and 34-35 cash.<sup>9</sup>

The above indicates inflated rice prices in the cities of the Yangzi Delta from 1786 onwards. Nevertheless, without a complete series of rice prices, we cannot tell in which years the price of rice was 27-28 cash, and in which years it rose to 34-35

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<sup>6</sup> *Gaozong shilu*, 1389/17a (QL 56.10).

<sup>7</sup> See, for instance, Peng, *Zhongguo huobi shi*, p. 824 and 829 note 21; Chen, *Yongzheng Qianlong nianjian de yinqian bijia biandong*, p. 14

<sup>8</sup> A *sheng* is a hundredth of a *shi*, or about 1 liter. See Table of Weights and Measures.

<sup>9</sup> Qian Yong (1759-1844), *Lüyuan conghua* (1838 edition; repr. Xuxiu Siku Quanshu Bianzuan Weiyuanhui, ed., *Xuxiu siku quanshu*, Shanghai: Shanghai guji chubanshe, 1995, vol. 1139), p. 18. Its first preface was written in 1825.



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cash. Without this data, we cannot track changes in the flow of grain on the Yangzi.<sup>10</sup>

In short, while there may well have been a general inflation of rice prices in copper cash in the Yangzi Delta in the late eighteenth century, the data backing this conclusion sheds little light on the rice market. In the following section, I will turn to silver to see if I can find a reliable series of rice prices.

### *Silver Prices In Kuping Tael*

Like copper cash, the standard for silver varied from market to market. In many transactions people used silver bullion, but the price of each ingot was based on fineness and weight. During the second half of the eighteenth century, the use of foreign silver coins spread up the coast from Guangdong to Jiangsu, but since the coins came from different countries, the silver standard remained unfixed.

However, in most government transactions and in official price reports, silver had to be uniformly evaluated according to the *kuping* tael unit of account. The *kuping* tael was a treasury tael, equal to approximately 37.3 grams of silver, and was theoretically of 1.000 fineness.<sup>11</sup>

There were abundant reports of grain prices in *kuping* taels in Qing documents, when a major duty of local officials was

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<sup>10</sup> Recently Kuroda attempted to solve this problem by providing a series of rice prices in Tunxi, in southern Anhui, which he found in an account book of a local clan with the Jin surname. See Akinobu Kuroda, "What can prices tell us about the 16<sup>th</sup>-18<sup>th</sup> century China? – A review of 'Shindai Chugoku no Bukka to Keizai Hendo (Prices and Economic Change in Qing China)' by Kishimoto Mio," *Chugokushigaku* 13 (December 2003), pp. 101-17. Tunxi was a regional market for neighboring counties, but since it was not in the Yangzi Delta, to what extent its economy was integrated with the delta remains in doubt. As well, it appears that Tunxi used a different standard of copper cash than the delta. For example, while rice was sold at 56-57 cash per *sheng* in Suzhou and neighboring cities, in Tunxi the price was as low as 9 cash. These are the problems we have to solve before we can make any meaningful comparison of rice prices between Tunxi and Suzhou, or other places.

<sup>11</sup> Vogel, "Chinese Central Monetary Policy, 1644-1800, pp. 4-5.

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to report on prevailing economic and social conditions, especially grain prices. These reports were compiled on the basis of prices gathered regularly from the market of the county capital, and submitted to the emperor.<sup>12</sup>

The Qing court demanded a high degree of accuracy in these price reports, which was assured by a sophisticated price reporting administration. By rule, county magistrates had to report to their superiors (the prefects) every ten days on the market price of upper, medium, and lower grade rice, converting local units of measure to the imperial *shi*, and local currencies to the *kuping* tael. From these reports, the prefects calculated average prices for each grade of rice on a monthly basis, and reported to provincial governors. Based on this price data, each provincial governor compiled a final price report of his province and presented it to the emperor in a secret memorial. The report was monthly, and under the name of each prefecture the governor listed the price of each grade of rice, as well as the amount by which the highest price varied from the highest price in the previous month, and their explanations for the price fluctuations.<sup>13</sup>

To guarantee accuracy, the Qing government compiled other reports for cross-examination, put together by officials who were completely outside the regular system. A brigade-general might mention the price level in the city where he was stationed. Governors and other officials might report on the level of prices in a neighboring province. Officials traveling from Beijing to new posts might mention the prices they observed as they traveled. Or censors might be sent out from Beijing, specifically to investigate and report on local prices.<sup>14</sup>

The success of the bureaucratic administration in the eighteenth century, a golden age in the Qing, was based on the price reporting system. Through these reports, the court in Beijing was able to comprehend the agricultural economy throughout the empire. Decisions on how much grain to take from government granaries and sell to famine-stricken counties were based on price reports. As Endymion Porter Wilkinson has noted, the price

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<sup>12</sup> Chuan and Kraus, *Mid-Ch'ing Rice Markets and Trade*, pp. 2-3.

<sup>13</sup> Wilkinson, *Studies in Chinese Price History*, pp. 114-23.

<sup>14</sup> Chuan and Kraus, *Mid-Ch'ing Rice Markets and Trade*, p. 6.

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reporting system allowed the court a much more effective use of the granaries for price stabilization and famine relief.<sup>15</sup>

Local officials were quite capable of handling the tael conversion in their price reports.<sup>16</sup> It was an official unit of account, and they received administrative funds as well as their salaries in silver, in *kuping* taels.<sup>17</sup> It is highly unlikely that they did not know exactly what their money could buy. Furthermore, the land taxes that they collected every year were registered in *kuping* taels. In actuality, many taxpayers paid copper cash, which the magistrates exchanged for silver, in *kuping* taels, in money shops, further proof that officials had to know the current relative worth of a *kuping* tael and copper cash.<sup>18</sup>

Chuan Han-sheng was the first historian to use official price reports to show price trends in rice in Suzhou in the eighteenth century; based on this data, he argued for an eighteenth-century price revolution. While Chuan's theory is still highly influential among China historians,<sup>19</sup> recent findings suggest modifications to his views.

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<sup>15</sup> Wilkinson, *Studies in Chinese Price History*, pp. 136-7.

<sup>16</sup> See Kuroda, "What can prices tell us about 16<sup>th</sup>-18<sup>th</sup> century China?", p. 103.

<sup>17</sup> Chuan and Kraus, *Mid-Ch'ing Rice Markets and Trade*, pp. 15-6.

<sup>18</sup> Kung-chuan Hsiao noted that magistrate staff often extorted taxpayers by fixing the rate higher than it really was and pocketing the difference. See Kung-chuan Hsiao, *Rural China: Imperial Control in the Nineteenth Century* (Seattle: University of Washington Press, 1960), pp. 122-3.

<sup>19</sup> An example of Chuan's influence is Madeleine Zelin's argument that high inflation caused the *huohao guigong* reform (return of meltage fees to the public coffers) to fail. She noted that local government finances had improved during the early eighteenth century because of the success of the *huohao guigong* reform, but in the later decades, since prices rose sharply, the budget was insufficient again. See Madeleine Zelin, *The Magistrate's Tael: Rationalizing Fiscal Reform in Eighteenth-Century Ch'ing China* (Berkeley, CA: University of California Press, 1992), p. 298. In addition, Philip Kuhn has argued that the rise in commodity prices in the late eighteenth century was one of the major causes of the White Lotus Rebellion between 1796 and 1805. See Philip Kuhn, *Rebellion and its Enemies in Late Imperial China: Militarization and Social Structure, 1796-1864* (Cambridge, Mass.: Harvard University



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### *Inflation Or Deflation: Long-Term Price Trends*

Chuan Han-sheng's decision to base his theory of a price revolution on Suzhou rice prices made good sense, as the city was the most important long-distance market for rice on the Yangzi. Based on the data he found, Chuan argued that rice prices were stable in the first half of the century, but began to rise at mid-century, and, by the last quarter of the century, were four times what they had been at the beginning of the century. (See Table 3.1, from Chuan's study on Suzhou.) Along with demographic growth, Chuan saw the inflow of foreign silver as the major driving force for the inflationary trend of rice prices.<sup>20</sup>

The weakness of this theory lies in the paucity of the data. Chuan found bountiful price data from official reports between 1693 and 1719,<sup>21</sup> but he based the price trend in the remaining years of the century on only three points of data, and only the first two points, from the 1748 and 1770, are prices of rice in Suzhou; the third point, from the year 1786, is actually the price of rice in Wuxi county, Changzhou prefecture.<sup>22</sup> Moreover, the extraordinarily high prices of rice in 1748, 1770, and 1786 were due to sudden grain shortages in the lower Yangzi. Therefore, a comparison of these prices with prices from early in the century, as they appear in Table 3.1, exaggerates the scale of inflation, and therefore, the impact of imported silver.

The price of rice in Suzhou in 1748, which was 2 taels per *shi* according to Chuan, was a high point in the inflationary trend in the first half of the century. Rising prices had been noticed by contemporaries, including the Qianlong emperor. In 1748 he noted: "Grain is a daily necessity of the people. However, in

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Press, 1970), pp. 50-1.

<sup>20</sup> Chuan, "Meizhou baiyin yu shiba shiji Zhongguo wujia gemin de guanxi," pp. 475-508.

<sup>21</sup> Later, in another article, Chuan supplemented the price data of rice in Suzhou with data from official reports between 1723 and 1735. See Chuan Han-sheng, "Qing Yongzheng nianjian (1723-35) de mijia," 1959, repr. Chuan Han-sheng, *Zhongguo jingjishi luncong*, 1972, vol. 2, pp. 521-2.

<sup>22</sup> Chuan, "Meizhou baiyin yu shiba shiji Zhongguo wujia gemin de guanxi," p. 483.

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recent years, it is getting dear. How can the poor bear that?"<sup>23</sup> In the early months of the year he had demanded solutions, initiating extensive discussions among provincial governors. Officials generally attributed inflation to the rapid population growth, and Chuan Han-sheng added that the influx of American silver contributed to the problem.<sup>24</sup> Although there is no question that prices were high that year, it is necessary to put these prices in context to understand the long-term trend.

The high price of rice in Suzhou of 1748 was actually the consequence of a poor harvest coupled with a policy disaster. In the autumn of 1747, Suzhou and its neighboring prefectures reaped a poor harvest because of storms and flooding. To put more grain on the market, Anning, the Jiangsu Provincial Governor, ordered grain hoarders to sell their stock, and for reduced prices. According to some reports, Anning even confiscated the grain of hoarders who refused to participate in these reduced-price sales. Anning's high-handed policy reduced grain merchants' profits, discouraging them from importing rice from other provinces, which aggravated the grain shortage in Suzhou. The situation did not improve until Anning left the post in the autumn of 1748.<sup>25</sup> As a 1748 memorial by Zhejiang Governor Fang Guancheng noted,

With regard to the high price of rice in Suzhou, Songjiang, Hangzhou, and Huzhou, there are different explanations, but most [observers] attribute it to the rare arrival of guest merchants.<sup>26</sup>

Yeh-chien Wang has provided a detailed survey of Suzhou rice prices, using relatively complete official reports from the First Historical Archives in Beijing, and modifying Chuan's

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<sup>23</sup> This imperial edict was quoted in a memorial presented by the official Yang Xifu in 1748, compiled in *Qing jingshi wenbian*, 39/21a-25b.

<sup>24</sup> Chuan Han-sheng, "Qianlong shisannian de migui wenti," 1965, repr. Chuan, *Zhongguo jingji shi luncong*, 1972, vol. 2, pp. 547-66.

<sup>25</sup> *Gaozong shilu*, 298/11a-b (QL 12.9), 300/9a-b (QL 12.10), 314/33a-b (QL 13.5); *Shiliao xunkan* (Taipei: Kuofeng chubanshe, 1963), vol. 29, p. 563.

<sup>26</sup> *Zhupi zouzhe*, microfilm, reel no. 56, pp. 1116-9 (QL 13.5.19).



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conclusions.<sup>27</sup> Figure 3.1 shows the trends in Suzhou rice prices according to this data. Although Wang argued in favor of a price revolution, the data showed that his estimated price increases fell far below Chuan's. While Chuan argued that prices quadrupled between 1700 and the 1780s, Wang's prices increased by only 50 per cent. Moreover, Wang's data, more clearly than Chuan's, showed that prices thereafter dropped dramatically. In the last twelve years of the century they fell from around 1.4 taels per *shi* to between 1.4 and 1.16 taels. In 1799 the price of rice rose again, but the decline from 1789 to 1798 is quite obvious.

Yeh-chien Wang noticed this decline but dismissed it, remarking that price reports for those years were unreliable. He stated that until new data were found, there could be no satisfactory explanation for the anomaly.<sup>28</sup> The theory of a price revolution was too influential; and the discovery of another new price series from Xiaoshan county, Zhejiang province, increased his hesitancy in accepting the new data he had found.

### *Prices in Xiaoshan*

The new price report from Xiaoshan, first cited by Tanaka Issei, was drawn from a record by the Lai lineage, and provided an unbroken series of grain prices from 1683 to 1802.<sup>29</sup> Despite being a small county in Shaoxing prefecture, Xiaoshan was close to Hangzhou, the largest commercial city and the provincial capital in Zhejiang. It seems likely that this Xiaoshan series could provide an insight into rice prices in Hangzhou and perhaps even the Yangzi Delta.

The discrepancy between the official rice prices in Suzhou and the Lai lineage record in Xiaoshan is noticeable. Table 3.2 compares the rice prices of Xiaoshan and Suzhou, while Figure 3.2 portrays the price trends in these two places. The figure shows that, as has been noted by Yeh-chien Wang, for most of the eighteenth century trends in both places moved in the same direction, but after the 1786 famine they diverged: the price of rice

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<sup>27</sup> Wang, "Secular trends of rice prices in the Yangzi Delta," pp. 35-68.

<sup>28</sup> *ibid.*, p. 49.

<sup>29</sup> Tanaka Issei, "Shindai Settō sōzoku no soshiki keisei ni okeru sōshi engeki no kinō ni suite," *Tōyōshi kenkyū* 44, no. 4 (1986): 32-67.

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in Suzhou declined, while Xiaoshan prices had another peak in 1794; and overall, Xiaoshan prices were higher than those in Suzhou. What happened to these two price series?

Some rice data in the Lai lineage record reflected supply and demand in Xiaoshan. For example, rice cost 3.5 taels per *shi* in 1785 and 1786, following a catastrophic drought in 1785 and resulting widespread famine in Henan, Shandong, Hubei, Anhui, and Jiangsu.<sup>30</sup> Wang Huizu, a native of Xiaoshan, witnessed the misery on his journey from Suzhou to Beijing and left a first-hand account of terrible suffering: corpses lay unburied and families sold their sons and daughters into slavery.<sup>31</sup> Rice went for 4,300 copper cash per *shi* in Wuxi,<sup>32</sup> while north of the Yangzi River, prices were even higher. In Suqian county a *shi* of rice cost 10,200 copper cash.

However, some price information in the Lai lineage record was mysterious. In 1794, although there were no reports of famine in Zhejiang, rice was sold for 3.5 taels per *shi*, a price as high as in the famine years of 1785 and 1786. Wang Huizu, writing in 1796, remembered the sudden jump in commodity prices in terms of copper cash two years earlier:

During the summer [of 1794], one *dou* of rice cost 330-340 cash. In the past, when the price of rice rose to 150-160 cash, people would starve. Now, rice is often dear, but people still live happily. The reason is, in previous years, high prices affected only rice; but now, all items including fish, shrimps, vegetables, and

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<sup>30</sup> *Gaozong shilu*, 1223/16b-17a (QL 50.1), 1226/11a-12b (QL 50.3), 1236/29a-b (QL 50.8), 1236/29b-30b (QL 50.8); *Zhupi zouzhe*, microfilm, reel no. 57, pp. 3011-5 (QL 50.8.15).

<sup>31</sup> Wang Huizu, *Bingta menghen lu* (preface in 1796; repr. in *Wang Longzhuan xiansheng yishu*, vol. 1, [Jiangsu ju, 1889]), *shang*/56b-62a.

<sup>32</sup> Chuan Han-sheng cited this figure, converted into silver, as one of his principal data. Wang Huizu stated that the conversion rate between copper cash to silver was about 1000 *wen* to 1 tael in Xiaoshan of 1786. Applying this rate to Wuxi, Chuan suggested that 4,300 *wen* equalled about 4.3 taels, an extremely high price at the time. See Wang, *Bingta menghen lu*, *xia*/57a; Chuan, "Meizhou baiyin yu shiba shiji Zhongguo wujia gemin de guanxi," p. 483 notes.

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fruit are expensive. Therefore, both peddlers and peasants can make a living.<sup>33</sup>

Three points are made in the above account. First, the price of rice was 3,300-3,400 copper cash per *shi*. Second, the prices of all commodities were rising. Third, because of this peddlers and peasants could earn a living, and were not starving. Based on these facts, Lin Man-houng argued that the high price of rice in Xiaoshan in 1794 was not caused by crop failure, but by a rapid increase in the supply of silver. She pointed out that general inflation was consistent with the large quantities of silver flowing into China through the overseas trade; as a result of the influx of silver, the price of bullion fell, bringing about the rise of commodity prices in silver. According to Lin, Xiaoshan was one of those areas affected by increased silver.<sup>34</sup>

The argument concerning silver imports is impressive, except that Wang Huizu did not indicate a fall in the price of silver, nor the widespread use of silver in Xiaoshan. He noted, instead, that the amount of cash that was exchanged for a tael of silver had risen considerably between 1761 and 1792, from just under 800 to 1,300, and that it continued to rise until, in 1794, it stood at 1,440-1,450. Wang Huizu attributed this to the prevalence of adulterated copper coins.<sup>35</sup> Therefore it may be concluded that the inflation of commodity prices in Xiaoshan was driven by the devaluation of copper cash, and not by the increase of silver in circulation. The price of rice would be high for the same reason.

It is then probable that the lineage account of rice prices was distorted in the process of converting cash amounts to silver. According to the Lai lineage record, a *shi* of rice in Xiaoshan sold for 3.5 taels of silver in 1794. Converted back to copper cash at the rate of 1,440-1,450 cash per tael, as cited by Wang Huizu, this was equivalent to 5,040-5,075 cash, a price far too high to be credible, even despite the fall in copper cash in those years. According to Wang, the price was only between 3,300 and 3,400 cash that year.

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<sup>33</sup> Wang, *Bingta menghen lu*, xia/65b.

<sup>34</sup> Lin, "Shijie jingji yu jindai Zhongguo nongye," pp. 295-8.

<sup>35</sup> Wang, *Bingta menghen lu*, xia/57a and 65b.



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Kuroda agreed that in the last decades the price quotations in the Lai lineage record did not refer to market prices. He supposed that the lineage's accountants distorted prices to avoid giving the impression that the lineage was saving money on ritual expenses. He argued that the lineage's accountants adopted a fixed conversion rate between cash and tael when compiling the price record, instead of calculating by the actual market exchange rate.<sup>36</sup> But if the accounting manager altered the conversion rate arbitrarily, the record is of limited use.

Without knowing the conversion rate, it is impossible to calculate original market prices from this distorted record. Kuroda postulated that the Lai lineage might have used the fixed standard of 700 copper cash to a tael, known also as "70 percent cash" (*qizhe qian*).<sup>37</sup> It is true that, as shown in the study by Kishimoto Mio, in Fujian and the Yangzi Delta, people used a fixed rate of copper cash for a tael of silver. In Fujian, the amount was about 800 to 850 cash, while in the Delta it was 700.<sup>38</sup> However, that does not mean that Xiaoshan county, in a different province, had the same practice. In fact, Wang Huizu noted that, in 1799, in the districts east of Xiaoshan city, people called the legal cash (*zhiquan*) the "90 percent cash" (*jiuzhe qian*), and this fixed conversion rate did not refer to silver and copper cash, but to "legal cash", the copper cash issued by the state, and "market cash" (*shiquan*), the private cash that circulated in local markets.<sup>39</sup>

Compared to the Lai lineage account, the reminiscences left by Wang Huizu are much more useful for reconstructing the money economy in Xiaoshan. As well as leaving a comprehensive record of prices, Wang gave clear explanations of the figures

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<sup>36</sup> Kuroda, "What can prices tell us about 16<sup>th</sup>-18<sup>th</sup> century China?," p. 109.

<sup>37</sup> *ibid.*

<sup>38</sup> Kishimoto Mio, *Shindai Chugoku no bukka to keizai hendo* (Tokyo: Kenbun Shuppan, 1997), pp. 327-63.

<sup>39</sup> By this standard, 100 market cash equaled 90 legal cash. Wang emphasized that in the county city and its neighboring districts the conversion rate was 100 market cash to 95 legal cash, and that the rate changed depending on the market. See Wang Huizu, *Menghen luyu* (1806; repr. in *Wang Longzhuan xiansheng yishu*, vol. 1 [Jiangsu ju, 1889]), 36b-37a, 64b.

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quoted. He was very conscious of price differences in various locations, and when quoting prices, he mentioned what kind of money he was referring to. Table 3.3 shows the prices of copper cash in Xiaoshan and its nearby districts in terms of rice, *kuping* taels, and foreign silver dollars between 1786 and 1805.

The copper cash prices of rice, as shown in Table 3.3, were consistently high in the late eighteenth and early nineteenth centuries, but that was not necessarily due to the debasement of copper cash. In 1802, 1803, and 1805 (there is no data for 1804), Wang Huizu noted that despite good autumn harvests of rice, continuous rainfall in the third and fourth lunar months destroyed the wheat crop and escalated the prices of other grains, including rice. The worst season was in 1805, when the price of rice soared to 4,500 to 4,600 cash per *shi* in the third lunar month. On the 29<sup>th</sup> day of that month, thousands of people rushed to a local Buddhist temple to buy government grain at a discounted price, and sixty women were killed in the ensuing crush.<sup>40</sup>

The debasement of copper cash occurred slowly over the last quarter of the eighteenth century, as Wang Huizu noted in 1792, commenting on the price changes in Xiaoshan: “Before 1761, for each *kuping* tael of silver, one exchanged no more than 780-790 cash. In 1786, the exchange rate was still less than 1,000 [cash]. Now it is 1,300 cash.”<sup>41</sup> Due to the drop in the value of copper cash, local officials altered the conversion rate for taxes. As noted earlier, though the state collected the land tax in silver, local officials allowed taxpayers to pay in copper cash. When the value of cash declined, the amount needed (to convert into silver) rose. When customary fees (*lougui*) were added, increased according to inflation, taxpayers faced a sudden steep rise in taxes. In 1792, when the conversion rate of one *kuping* tael was 1,300 cash, county magistrates actually demanded 1,800-2,000 cash for the land tax. Besides the land tax, people in Xiaoshan had to pay the grain tribute tax, an additional tax collected only in the rice-producing provinces. By rule the tax was levied in kind, but it had been a common practice for taxpayers to pay cash to their magistrates, who then bought rice to ship to the capital. In 1792,

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<sup>40</sup> Wang, *Menghen luyu*, 69b-84a.

<sup>41</sup> Wang, *Bingta menghen lu, xia*/57a.

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due to the drop in the value of copper cash, the Xiaoshan magistrate had to collect more cash than usual to buy rice for the tribute tax. When people in Xiaoshan found that they had to pay 40 to 60 cash more for each *dou* of rice than they had in the previous year, some taxpayers sued the magistracy for corruption, though, as Wang remarked, to no avail.<sup>42</sup>

The debasement of copper cash reached its height in 1794, when one *kuping* tael was made up of 1,440-1,450 cash, while the price of rice soared to 330-340 cash per *dou*. But as Wang Huizu noted, and has been cited earlier, famine was averted because: "...all items including fish, shrimps, vegetables and fruit are expensive."<sup>43</sup> In the surge of inflation, peddlers and peasants were less affected, since they asked higher prices for their goods and grain as well.

The price of copper cash continued low in 1795 and 1796, but it took an upturn in 1797, as can be seen in the changed conversion rate between silver dollars and copper cash in Table 3.3.<sup>44</sup> The table shows that a silver dollar went for 1,070-1,090 cash in 1795, rose to 1,200-1,300 in 1796, and plummeted rapidly in 1797. Wang noted:

At the beginning of the tenth lunar month, each dollar of foreign silver was sold for 1,200 cash. [The price] decreased day by day, and within ten days, each dollar was sold for only 800 cash.

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<sup>42</sup> *ibid.*, xia/57b.

<sup>43</sup> *ibid.*, xia/65b.

<sup>44</sup> Silver dollars, called "*yangqian*" or "*fanyin*" (foreign silver), were brought to Suzhou and Hangzhou by inland merchants in the late 1770s, but to what extent the silver was used as means of exchange remains in doubt. (See Zheng Guangzu, *Xingshi yibanlu* [1845; reproduction of the 1852 edition by Hangzhou: Hangzhou Guji Chubanshe, 1982], 44a.) Silver coins appeared in Xiaoshan around the same time, but for many years, as Wang Huizu noted, they were used only as marriage gifts. It was not until the last decade of the century, when more silver coins appeared, that local people preferred them to silver bullion as money to use in larger transactions in Xiaoshan. See Wang, *Bingta menghen lu*, xia/79a-b.



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In 1799, a silver dollar bought only 840-845 cash. Although in 1800 the rate increased slightly to 870-880 cash in the first half of the year, it dropped again to 760-770 cash in the last month. In 1801 and 1802, the rate dropped as far down as 650 and 650-660 cash respectively.<sup>45</sup>

Two main points can be drawn from investigation of Xiaoshan prices. First, the debasement of copper cash, which may have started in coastal China in the 1770s, or even earlier, became serious between 1792 and 1796. Second, beginning in 1797, the value of copper cash began to rise. In 1800, as shown in Table 3.3, the retail price for a *kuping* tael was 1,000 copper cash, marking a return to the same level as in 1786. The fluctuating conversion rate, as discussed earlier, was caused in part by the over-supply of illegal debased cash. As we shall see, the instability of imported silver also contributed to the fluctuation.

### *Silver Imports In The Napoleonic Wars*

By the early fifteenth century, silver was so dominant a medium of exchange in China that we can speak of a "silver economy." In 1433, the Governor of South Zhili, Zhou Chen, commuted the land tax in the heavily taxed prefectures of Suzhou, Changzhou, and Zhenjiang to payments in silver. In 1436, officials in Beijing converted stipends for military officers to payment in silver. In the same year the land taxes for the wealthiest southern provinces, including South Zhili, Zhejiang, Jiangxi, and Huguang, were commuted to silver. Besides tax payment, merchants began to use silver as the major medium of exchange in inter-regional trade. By the 1430s paper currency, which had circulated widely in the Yuan and early Ming, quickly fell into disuse. Though copper cash continued to serve for small exchanges in local markets, China had transited to a silver economy.<sup>46</sup>

The heavy demand for silver increased its price in China, and brought a massive influx of the metal from Japan and the New Continent. In the sixteenth century, China began to import silver from Japan, following Japanese exploitation of their own rich

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<sup>45</sup> *ibid.*, xia/79a; Wang, *Menghen luyu*, 5a-69b.

<sup>46</sup> Von Glahn, *Fountain of Fortune*, pp. 75-6.

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silver mines.<sup>47</sup> Chinese junks laden with silk flocked to Japanese ports, especially Nagasaki, to trade for silver. The trade reached its zenith in the early seventeenth century. Kobata Atsushi has estimated that the annual amount of Japanese silver taken to China was 200,000 kg. Seiichi Iwao's estimate is only a little less, at 130,000-160,000 kg.<sup>48</sup>

The Sino-Japanese trade was dealt a fatal blow in the early Qing; in 1661 the court banned settlement on the coast to isolate Ming loyalists occupying the island of Taiwan, causing a severe shortage of silver from Japan. This policy of coastal evacuation, as shown in the study by Mio Kishimoto, brought a sharp rise in silver prices along with a general slump in commodity prices. Farmers were particularly hard hit as the land tax, paid in silver, had to be met from the sale of their crops.<sup>49</sup> In 1684, following Qing seizure of Taiwan, the government finally repealed the maritime ban, but the silver trade between China and

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<sup>47</sup> The sharp rise in Japanese silver production was partly due to the gradual unification of the country by military leaders such as Oda Nobun (1534-1582), Toyotomi Hideyoshi (1536-1598), and Tokugawa Ieyasu (1542-1616); the latter two were particularly sensitive to the economic and political benefits of bullion mining. Perhaps even more important than the move toward political unification were the technological improvements in smelting and refining, introduced from abroad in the sixteenth century. See William Atwell, "Ming China and the emerging world economy, c.1470-1650," in Denis Twitchett and Frederick W. Mote, ed., *The Cambridge History of China*, vol. 8, *The Ming Dynasty 1368-1644*, Part 2 (Cambridge: Cambridge University Press, 1998), pp. 396-8; Robert LeRoy Innes, "The Door Ajar: Japanese Foreign Trade in the Seventeenth Century" (Ph.D.diss., University of Michigan, 1980), pp. 23-4.

<sup>48</sup> Atsushi Kobata, "The production and uses of gold and silver in sixteenth- and seventeenth-century Japan," *Economic History Review*, 2<sup>nd</sup> series, 18, no. 2 (1965): 245-66; Seiichi Iwao, "Japanese foreign trade in the 16<sup>th</sup> and 17<sup>th</sup> centuries," *Acta Asiatica* 30 (1976): 8-10.

<sup>49</sup> See Nakayama Mio, "Shindai zenki Kōnan no beika dōkō"; Mio Nakayama, "On the fluctuation of the price of rice in the Chiang-nan region during the first half of the Ch'ing period, 1644-1795," *Memoirs of the Research Department of the Toyo Bunko, Tokyo* 37 (1979): 55-90; and Mio Kishimoto-Nakayama, "The Kangxi Depression and early Qing local markets," *Modern China* 10, no. 2 (Apr 1984): 227-56.

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Japan never quite recovered due to the depletion of Japanese silver mines.<sup>50</sup>

The loss of Japanese silver did not have much effect on the Chinese economy, which increasingly depended on silver from Central and South America. In 1571, the Spanish had colonized the Philippines and made Manila their major port for the Sino-Spanish trade. Every year Spanish galleons laden with New World silver sailed across the Pacific to Manila. Spanish merchants in Manila used silver to pay for silk and porcelain, transported from China by Fujian merchants.<sup>51</sup> The Manila trade was set back in 1639-40 when the Chinese population in Manila was massacred,<sup>52</sup> but it revived, and throughout the eighteenth century, according to Chuan Han-sheng, China was able to import a considerable amount of American silver through the Manila trade.<sup>53</sup> What changed the silver trade was China's tea trade.

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<sup>50</sup> Atsushi KOBATA, an authority on the mining industry in pre-modern Japan, noted that the output of silver declined after the mid-seventeenth century. See Kobata, "The production and uses of gold and silver in sixteenth- and seventeenth-century Japan," p. 245.

<sup>51</sup> Liang Fangzhong, "Mingdai guoji maoyi yu yin de shuchuru," *Zhongguo shehui jingjishi jikan* 6, no. 2 (Dec., 1939); repr. in Liang Fangzhong, *Liang Fangzhong jingjishi lunwenji* (Beijing: Xinhua shuju, 1989), pp. 172-3.

<sup>52</sup> In 1639, the economic situation in Manila became desperate. When the local government imposed new levies and taxes to make up for its operating shortfall, tensions between the Spanish and Chinese exploded into open hostility. Between November 20, 1639, and March 15, 1640, the better-armed Spanish killed more than 20,000 Chinese throughout the Philippines. As may be imagined, the massacre ruined the Chinese commercial environment in Manila, sharply reducing the flow of silver from Manila to China. See William S. Atwell, "Notes on silver, foreign trade, and the late Ming economy," *Ch'ing shih wen-t'i* 3, no. 8 (Dec 1973): 10-3.

<sup>53</sup> Chuan indicates that the annual amount of Spanish silver shipped via Manila to China was normally 2-3 million pesos, though it sometimes reached 4 million pesos in the eighteenth century. At the equivalence of 1 peso to 0.26 kg of silver in the eighteenth century, China imported between 520,000 and 780,000 kg of silver in a normal year, and sometimes as much as 1,040,000 kg. See Chuan Han-sheng, "Ming-Qing jian Meizhou baiyin de shuru Zhongguo," 1969; repr.



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In the late seventeenth century, tea drinking became a widespread habit across Europe, and the major tea-drinking city was London. K. N. Chaudhuri noted that the spread of tea-drinking ran parallel with the greater availability of sugar (from West Indian plantations) and the decline in its cost. For people in lower income groups, tea was appealing not only for its taste and energizing properties, but as a means of taking sugar.<sup>54</sup>

The tea trade grew astonishingly in the eighteenth century. At first European trading companies paid little attention to this new product, buying it in small amounts from private traders. The Dutch East India Company (*Verenigde Oostindische Compagnie* or *VOC* in Dutch, literally "United East Indies Company") obtained tea from Chinese junks in Batavia, while the British East India Company acquired its tea from individual ships in India returning from China. Later, when these trading companies became aware of the enormous potential of tea sales in Europe, they went directly to China for their tea. Their ships, laden with silver in ingots or coins, came to Guangzhou, the legal port for the export trade, to buy tea. Chaudhuri, using records from the British East India Company, has shown a five-fold growth in tea imports to England, from 8.9 million lb in the 1720s to 37.3 million lb in the 1750s. The price the company paid, mainly in silver, was high and still rising, from £611,000 (or 69,000 kg of silver<sup>55</sup>) in the decade between 1721-30 to £1,693,000 (or 192,000 kg of silver) in the decade from 1751-60. And these enormous amounts of tea do not include tea smuggled into England to evade high duties, or the tea consumed in other European countries.<sup>56</sup> The influx of silver so lowered its value in China that by 1763, Japan, the silver exporter for China for two centuries, began to import silver from China. Between 1763 and 1782, Japan absorbed a total of 6,374

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Chuan Han-sheng, *Zhongguo jingjishi luncong*, 1972, vol. 1, p. 439.

<sup>54</sup> K. N. Chaudhuri, *The Trading World of Asia and the English East India Company, 1660-1760* (Cambridge: Cambridge University Press, 1978), p. 385.

<sup>55</sup> One pound sterling was equal to 0.1134 kg of silver; see the "Table of Currencies."

<sup>56</sup> Chaudhuri, *The Trading World of Asia and the English East India Company*, pp. 386-8.

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*kanme* (or 24,000 kg<sup>57</sup>) of silver from China.<sup>58</sup> The amount was small, but carried great historical significance, showing that by the mid-eighteenth century, because of the flourishing tea trade, the price of silver in China was lower than in Japan.

As England imported more tea than any other country, it was natural that China relied on the British East India Company to import silver. This reliance became even more pronounced after the British Parliament passed the Commutation Act in 1784. Before the act, the high British tea duty had encouraged other European companies to smuggle tea into England. No one was sure of the true extent of tea smuggling, but illicit tea seized by customs officers and sensational stories by reformed smugglers convinced everyone that the problem of tea running was out of control.<sup>59</sup> As a measure against it, the British Parliament passed the Commutation Act which reduced the customs duty on tea from 119 to 12.5 per cent.<sup>60</sup> The act not only stimulated tea exporting from China, it made smuggling less profitable, thus concentrating the tea trade in the hands of the British East India Company. H. B. Morse showed how the company benefited from the act from the following figures. Between 1776 and 1780 the total amount of tea exported to Europe from Guangzhou was 698,000 *shi*, with the British East India Company exporting 210,000 *shi* of it, or less than one third. After the Commutation Act, from between 1786 to

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<sup>57</sup> The conversion rate is 1 *kanme* to 3.76 kg of silver, as suggested in Brian Moloughney and Xia Weizhong, "Silver and the fall of the Ming: a reassessment," *Papers on Far Eastern History* 40 (September 1989): 78.

<sup>58</sup> Yamawaki Teijirō, *Nagasaki no tōjin bōeki* (Tokyo: Yoshikawa kōbunkan, 1964), p. 215.

<sup>59</sup> Chaudhuri, *The Trading World of Asia and the English East India Company*, pp. 385, 392.

<sup>60</sup> The Commutation Act was passed by the House of Commons on August 16, 1784; from August 1, 1785, all the existing duties, imposts, subsidies, and surtaxes were repealed, replaced by a simple duty of 12.5 per cent on all tea sold at the company's sales. See Earl H. Pritchard, *The Crucial Years of Early Anglo-Chinese Relations, 1750-1800* (Pullman, Washington, 1936), p. 146; and H. B. Morse, *The Chronicles of the East India Company Trading to China, 1635-1834* (1926-29; repr. Taipei: Chengwen, 1966), vol. 2, p. 116.

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1790, the total export from Guangzhou was 1,096,000 *shi*, and the British East India Company had bought 774,000 *shi*, or over half of it.<sup>61</sup> From that point on, disruption in China's economy was certain if the company had any difficulty acquiring silver. What would soon prevent the British East India Company from obtaining European silver was war with France.

During the Napoleonic Wars British merchants still put to sea and sailed for China; according to H. B. Morse the British East India Company sent 11 ships to Canton in 1791, 16 in 1792, 18 in 1793, 21 in 1794, 16 in 1795, 23 in 1796, 18 in 1797, 16 in 1798 and 15 in 1799.<sup>62</sup> But not even British naval superiority allowed the company to buy enough European silver to sustain the China trade. As shown in Table 3.4, in 1791 and 1792, the company could still ship 6,532 kg and 19,596 kg of silver respectively to Guangzhou. But when war with France broke out in 1793, for three years company ships could not bring a single kilogram of silver to China.<sup>63</sup> The transport of silver resumed in 1796, but the quantity was very small, only 4,572 kg. In 1797, the amount of silver imported rose, but only to 26,684 kg. It was not until 1798, with the war nearly over, that normal shipments of silver from London resumed. That year, the company shipped 49,971 kg of silver to Guangzhou.

The scarcity of silver caused the British East India Company serious difficulties in its China trade. On March 11, 1793, the company's Canton treasury still held 1,138,338 taels (or 43,029 kg) of silver.<sup>64</sup> By June 1796 the loss of imported silver had reduced the amount to just 13,081 taels (or 494 kg). With such a small amount of capital in hand, the British East India Company had extreme difficulty continuing its trade. Although some credit had been used in the trade, specie still played an important role in transactions. When purchasing tea the company had to pay part of the price in silver, and customs duties and fees had to be paid in silver. In December 1796, because of the severe silver shortage, the Committee, the branch of the British East India Company at

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<sup>61</sup> *ibid.*, p. 117.

<sup>62</sup> *ibid.*, pp. 119-347.

<sup>63</sup> *ibid.*, pp. 184, 193, 205, 256, 266, 278, 294, 310 and 322.

<sup>64</sup> *ibid.*, p. 205.



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Canton, urged the London office to dispatch “an ample remittance of bullion” with all speed. To buy Chinese goods the Committee even turned to barter. On February 8, 1797, the Committee decided to use tin and lead in lieu of silver; later that month a Chinese merchant was actually paid in tin and lead for his raw silk and Nankeens.<sup>65</sup> Because of the war the silver taken to China shrank to a trickle, making trade between Chinese and British merchants difficult to sustain.

The decline in imported silver also must have caused the price of silver in China to soar, which would be reflected in the silver-to-cash exchange rate, as was detected in Xiaoshan, Zhejiang. It also would have led to a fall in commodity prices in terms of silver. In this light the decline in Suzhou grain prices in the final decade of the eighteenth century is not a reporting error, but a reflection of the fluctuating value of silver. It was part of the price trend of the eighteenth century and should be taken into consideration in any description of long-term inflation.

### *Conclusion*

The eighteenth century was a golden age in China’s market development. Although the silk trade between China and Japan, which flourished from the mid-sixteenth to mid-seventeenth centuries, had declined, the Chinese found a new product in tea with which to maintain commercial links with the world. Through the tea export, China obtained vast quantities of silver from European countries, especially Britain. The volume of silver taken to China increased hand in hand with the expansion of the international tea trade, especially just after the Commutation Act of 1784 and before the onset of the Napoleonic Wars. Chuan Han-sheng has suggested that increases in silver inflow justified the theory of inflated commodity prices quoted in silver. It is possible that prices escalated even faster from the 1750s to the 1780s because of the immense expansion of the tea trade.

As China became more deeply enmeshed in the world economy, its own economy became more sensitive to the financial ups and downs of its trading partners. As a result, from 1793, when Britain was at war with France and the British East India

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<sup>65</sup> *ibid.*, pp. 277-81.

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Company had little silver to send to China, Chinese commodity prices quoted in silver fell sharply.

At the same time it should be noted that the Suzhou grain prices cited by Yeh-chien Wang fell not for 1793 but for 1788, when phenomenal amounts of silver were still coming into China. Therefore there must have been other reasons for the sharp downturn, even if low prices in later years were sustained by the declining silver import. These other reasons are to be found in China's internal development, and will be discussed in the next chapter.