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The Ming Salt Certificate: A Public Debt System in Sixteenth-Century China?

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Throughout the Ming dynasty the government monopolized the salt trade. In return for delivering grain to border garrisons, merchants received salt certificates, which they then could use to draw salt from government salters. The salt certificate system, known as the grain-salt exchange, or kaizhong, functioned as a public debt for the Ming government. Against the backdrop of a fiscal apparatus that still largely relied on tax-in-kind and labor service, the grain-salt exchange provided an unusual and efficient financial tool for the government. Buying and selling of the Lianghui salt certificates, beginning in the sixteenth century, gave birth to a speculative market of the salt certificate in the early seventeenth century. However, since the speculation blocked the redemption of the salt certificates and paralyzed the operation of the salt monopoly, in 1617, the government turned the speculative market into a more restrictive syndicate. This paper ends with a discussion on the possible impact the syndicate system had on the development of public credit market in China.

KEYWORDS salt monopoly, public debt, financial speculation, kaizhong, salt syndicate

Introduction

While Larry Neal traced the origin of capitalism in sixteenth-century Europe to the Dutch public debt (annuities) and foreign bills of exchange that spawned a vibrant stock and futures market in Amsterdam,¹ Reinhold Mueller went even farther back, studying public debt in the form of the Monte Vecchio of twelfth-century Venice in great detail,² and Fernand Braudel stated that the European economy was more developed than others “thanks to its superior instruments and tools: the bourse and various forms of credit.”³ In contrast, the Ming government issued a paper currency that failed almost immediately, it minted too little copper cash for its population, and its general hostility towards both domestic and foreign trade kept it from generating
revenue in any mercantilist manner: not even the influx of foreign silver was an intended outcome. In its last days its taxation system, although monetized to a considerable extent, still largely relied on tax-in-kind and labor services. Could it be perceived as anything but “backward” in comparison to Europe?

This paper does not argue that the Ming fiscal machine was ever comparable to its European counterparts in terms of public credit, or “raising money by credit.”¹⁹ The Ming state fit into Charles Tilly’s conceptual framework as “coercion-intensive,” at a time when England and France were embarking upon the path of “capitalized coercion.” But Ming financial history does have one interesting episode that is worth exploring, especially given that government’s anti-mercantilist rhetoric. This episode is the salt monopoly, the public debt system in the form of speculation in Lianghuai salt certificates.

The Ming salt certificate as a public debt

The Ming state managed salt production in much the same way that its numerous local administration governed the people, or commoners, through the household registration system.² In areas where salt was found, the government conveniently registered the locals as hereditary saltern households (zaohu 鹽戶); the able-bodied adult males of these households were supposed to harvest salt for the government as their major labor service. The Lianghuai Salt Distribution Commission, which generated most of the salt revenue, administered three sub-commissions which oversaw thirty salterns situated along present-day’s coastal Jiangsu. Headquartered in Yangzhou, the Lianghuai Salt Distribution Commissioner’s post was similar in duties and rank to that of a Provincial Administration Commissioner.³ To regulate salt consumption, the government matched the supply and demand of particular areas. Salt from Lianghuai, for instance, was supposed to go to the southern part of the South Metropolitan Area, as well as to all of Jiangxi and Huguang provinces and part of Guizhou province, mainly by way of the Yangzi River. With both production and consumption under government control, the Ming salt monopoly was in principle not unlike the socialist plan economy of the twentieth century. It was only in the transport of salt that the “plan economy” metaphor does not apply.

Beginning in 1370, the Ming government invited merchants to deliver grain to the frontier garrisons in return for salt certificates (yanyin 賜引). With these certificates a merchant could draw salt from a stipulated saltern to sell in a stipulated region.⁴ Known as the grain-salt exchange (kaizhongfa 開中法), ⁵ this system was a unique combination of state monopoly and market initiative, bridging the state and the market. Unlike the able-bodied men in a saltern household, which had to produce salt for the government as its hereditary labor service, a merchant was free to decide whether he wanted to participate in the grain-salt exchange or not. The grain-salt exchange was also unique in that the exchange did not involve money, but neither was it a direct barter of grain for salt as the transaction occurred through a piece of paper: the salt certificate. Insofar as it was a paper representing a debt the state owed
the merchant, denominated in salt, the salt certificate qualified as a public debt. Ray Huang was probably the first historian to view the Ming salt certificate in this light, stating that “a public debt was created without being recognized as such.”

If the Ming salt certificate can be regarded as a public debt, the next question is: was it being circulated, bought and sold, speculated upon? In other words, was a market created for the salt certificate? It was.

**Speculation on the salt certificate**

Although the Ming government described its salt monopoly through an entirely different vocabulary, the working of a public debt market is still discernible. The first sign of such a market came from an oft-quoted memorial of the Salt Distribution Commissioner of Lianghuai, submitted to the throne in 1440:

> Of merchants from various places who delivered grain in return for salt, there are some who have waited from the mid-Yongle period (1404-24), grandfathers, fathers, sons, and grandsons, succeeding one after the other, but still unable to draw the salt they are entitled to. Their hardship is beyond description.

Instead of criticizing the salt administration for its failures, as many Ming officials did, we can look at this famous passage in a new light. First, the Ming government meant to honor its debt to the merchant: it recognized the value of salt certificates issued as long as four decades earlier, even though it had failed to redeem them so far. Second, as long as the government admitted that it was unable to supply enough salt to redeem all outstanding salt certificates, it had to allow the descendants of deceased certificate holders to inherit the certificates. In this way the door was opened for the transfer of the salt certificate. Third, that a grandfather’s certificate was not redeemed by the time of his grandsons did not always mean that these certificate holders had been queuing up, so to speak, for three generations to redeem their certificates. It is equally plausible that salt certificates were circulated during that time, and only years later presented for redemption. Ray Huang noted that salt certificate holders did not mind being unable to redeem their certificates; although he did not pay much attention to the market element of the salt certificate, he realized that it was the certificate itself that they valued.

How was the salt certificate circulated? Under the grain-salt exchange, the merchant was issued two sets of documents after delivering grain to the frontier. He was supposed to bring these documents in person to a stipulated salt administration to apply for salt certificates, and then bring the certificates to stipulated salterns to draw the salt. At that point, he was to ship the salt to stipulated areas for sale. As China is a vast country, to carry out this scheme a salt merchant would have had to spend years traveling hundreds of kilometers. That such an unfeasible plan remained unchanged while the salt monopoly functioned could only mean that the plan was in fact ignored. What must have happened was in line with Adam Smith’s general description of economic development as the division of labor, specialization, and
trade. Two groups of merchants participated in the Ming grain-salt exchange, one delivering grain and the other drawing and shipping salt, each specializing in a different area, and trading with each other.

By 1568, Pang Shangpeng 龙尚鹏, a special envoy sent to Yangzhou to reform the Lianghuai salt administration, sent a memorial to the throne that not only revealed the division of labor among the merchants, but also that different kinds of bills were being traded:

In the early days of our dynasty, there were no such terms as the “frontier merchant [bianshang 遼商]” and the “interior merchant [neishang 内商].” But since the frontier merchants found it difficult to wait to draw salt, they sold their salt certificates to interior merchants. Since interior merchants found it difficult to deliver grain, they bought salt certificates from the frontier merchants. . . . I now summon both the frontier and the interior merchants, observe the public opinion, and propose that the prices of frontier merchants’ salt certificates be standardized into three levels. . . .”

Thus frontier merchants specialized in delivering grain, interior merchants in drawing salt, and frontier merchants sold the salt certificates to interior merchants. Pang Shangpeng’s official pricing scheme covered the three kinds of bills used in the transactions between the two merchant groups (see Table 1).

Lianghuai (literally “two Huai”), was divided into Southern Huai (Huainan 淮南) and Northern Huai (Huaibei 淮北). Certificates for Southern Huai were more expensive because they were redeemed with salt bound for the lucrative market in Jiangxi and Huguang along the Yangzi River. Northern Huai certificates were redeemed with salt bound for the much less prosperous northern Jiangsu and parts of Henan. There was good reason to put the salt certificate at the highest level in the pricing scheme because the jianying 見引, literally “current certificates,” could be redeemed for salt immediately. The Bill for the Application for Salt Certificate (qizhi guanyin 起纸關引), which allowed its bearer to apply for salt certificates, was one procedure behind the salt certificate in terms of redemption. At the lowest pricing tier was the Warrant for Arriving at the Commission (daosi kanhe 到司勘合), an official document two procedures behind the salt certificate in terms of redemption, certifying that its bearer had fulfilled the requirement of grain delivery and had arrived at the Salt Distribution Commission for the grain-salt exchange.

<table>
<thead>
<tr>
<th>Bills</th>
<th>Prices</th>
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<tbody>
<tr>
<td></td>
<td>Huainan (tael)</td>
</tr>
<tr>
<td>1 Salt certificate (jianying 見引)</td>
<td>0.90</td>
</tr>
<tr>
<td>2 Bill for the Application for Salt Certificate (qizhi guanyin 起纸關引)</td>
<td>0.80</td>
</tr>
<tr>
<td>3 Warrant for Arriving at the Commission (daosi kanhe 到司勘合)</td>
<td>0.70</td>
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</tbody>
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Details of Pang Shangpeng’s price scheme are less illuminating than the scheme itself, which embodies the Ming government’s recognition of speculation on the salt certificate and its related bills. If the Ming government created a market of public debt by issuing salt certificates, then merchants created a secondary market of public debt by speculating on them. Equally important was the fact that this speculation was denominated in silver. By 1568 silver had been part of the Ming fiscal machine for over a century, ever since the government’s 1436 decision to convert four million shi of tax grain into one million tael of silver, the beginning of the monetization of its taxation system.16 The Lianghuai salt monopoly was monetized in the 1520s, when the government belatedly realized that merchants had co-opted impoverished salt producers by advancing loans to them. In this way merchants had become de facto masters of salterns, so that the saltern household registration was on the verge of collapse while contraband was thriving. After long debate and many twists and turns in policy, the government came to terms with the reality and ruled that, for every certificate redeemed, the merchant had to pay a fee in silver, known as “surplus salt silver,” which would buy extra salt. In other words, the government traded salt to merchants in return for their grain, and then compulsorily sold them more salt in return for their silver.17 If the salt certificate could be regarded as a public debt, then the fee levied during redemption (the surplus salt silver) could be regarded as a stamp duty on the certificate.

An interesting comparison can be drawn between the Ming public debt system as embodied in the salt certificate and its European counterparts. Space does not allow for a detailed introduction of the European public debt system, but Venice, the “merchandised republic,” provides one example. Between 1250 and 1454, the Venetian Loan Office (Camera Imprestoria) issued 560 batches of the Monte, or public debt, that Venetian citizens were compelled to subscribe to in return for 5 percent annual interest, payable twice a year, in March and September. A market for speculation on the Monte flourished.18 In this way the Venetian government consciously pooled capital from a public credit market. The Ming salt certificate, however, bore no interest and was supposed to be non-transferable until 1568 when Pang Shangpeng devised his pricing scheme. Neither did the Ming government conceptualize the grain-salt exchange in terms of market and debt, although it did levy the surplus salt silver, a redemption fee that seemed equivalent to a stamp duty. When the Ming government realized that merchants were speculating on the salt certificate and its related bills, it imposed the 1568 pricing scheme which would have stifled the speculation, although merchants found a way around this (see below for details). For the Venetian government, annually imposing the forced loan Monte on its citizens was a vital means to generate revenue; for the Ming government, annually collecting surplus salt silver was also a vital means to generate revenue. For both governments, then, the public debt market was an institution to be reckoned with, and a force they could not totally tame. The Venetian government could only hope for a bullish market for its Monte and the Ming government for the timely redemption of salt certificates. Both were aware that things could go wrong.
Meanwhile the revenue generated by the salt monopoly was crucial to the Ming government. Quan Hansheng and Li Longhua found fourteen years between 1548 and 1617 when figures were available for both the annual income and the annual Ministry of Revenue expenditures: on average, military expenditures amounted to 3.18 million taels, or 74.5 percent of the Ministry’s annual expenditure. According to Yuan Shizhen, the famous official who established the syndicate system (gangfa) in Lianghui in 1617, the annual surplus salt silver amounted to 1.4 million taels, and more than half of it, or 680,000 taels, came from Lianghui alone; and this did not even include the revenue in the form of grain delivered to the frontier. Given the Ming government’s annual average military expenditure, which reached 3.18 million taels from the mid-sixteenth to the early seventeenth centuries, nearly half of it was footed by the salt monopoly.

The Syndicate system in 1617

With Pang Shangpeng’s pricing scheme in 1568, the Ming government recognized the existence of two groups of merchants and of a market for the salt certificate. But since there cannot be speculation if the price has been fixed, and speculation did continue unchecked, it is obvious that Pang Shangpeng’s pricing scheme had no effect whatsoever. The reason is obvious. Conspicuously absent from his scheme was any plan to enforce the pricing. While the government was perfectly capable of collecting the surplus salt silver, with brute force if necessary, it did not have the resources to monitor transactions between merchants. As things stood, the government had little to worry unless salt certificates were hoarded instead of redeemed, because then the surplus salt silver could not be collected. When that happened in early seventeenth century, a major change in the salt monopoly was triggered.

In 1617, when Yuan Shizhen arrived at Yangzhou as a special envoy to reform the Lianghui salt monopoly, the market for salt certificates had changed drastically since Pang Shangpeng’s 1568 visit: the redemption of salt certificates had been blocked for years. By 1617 the Ming government had been over-issuing salt certificates and gone so far as to collect surplus salt silver for future years. Known as “tax in advance” (jiezhen 借徵 or yuzheng 預徵), this predatory policy ironically benefited the wealthiest salt merchants. To collect the surplus salt silver for future years, the government had to issue certificates for those years or guarantee that whoever paid the surplus salt silver for those years would have priority at redemption time. Players in the salt certificate market had to have substantial amounts of capital to survive the “siege,” i.e., longer waiting period and higher cost. As a result, the uneasy balance between the frontier and interior merchants tipped in favor of a few powerful interior merchants.

Yuan Shizhen called these wealthy interior merchants “hoarders” (tunhu 銜戶) because they hoarded a lot of outstanding salt certificates, cornered the salt certificate market, and were in a position not only to exploit the frontier merchants but also to
undermine the operation of the salt monopoly itself. According to Yuan, the official price for a Huainan certificate was 0.85 taels, but hoarders were able to knock it down to between 0.17 and 0.18 taels, the black market price, when buying it from frontier merchants, and then to sell it at the official price to other, less powerful interior merchants. For every Huainan certificate, therefore, hoarders made a profit of nearly 0.70 taels. Given the annual redemption quota of nearly 700,000 Huainan certificates, the total profit pocketed by hoarders was close to 500,000 taels. Having amassed a large number of salt certificates, the hoarders did not remain idle until the day of redemption. Instead, a rather sophisticated mechanism, known as "fictive allotment" (xudan 虛單), was invented so that the salt certificate speculation became similar to futures or options in Western financial markets. According to Yuan:

As for the so-called "fictive allotment," initially [the Salt Administration] assigned an allotment number for those merchants who had registered their names. The merchants paid their surplus salt silver first, and purchased their certificates later to complete the allotment procedure. At first the administration reckoned that since it had taxed the salt merchants in advance, it was difficult to order them to purchase the certificates as well. Therefore the administration allowed merchants to postpone this purchase, which did not mean they could put it off forever. But the merchants seized this opportunity to delay purchasing their certificates indefinitely. It is this "fictive allotment" that has blocked millions of salt certificates.

With the allotment time as the deadline, speculation on salt certificates started even before they were issued, something like present-day buying and selling of options. It was also part of the reason why hoarders could buy certificates from frontier merchants at a very low price while selling them to interior merchants at full price.

Consequently, by taxing in advance, the government not only created an ever-lengthening redemption queue, but also strengthened its obligation to honor salt certificates. The powerful interior merchants who amassed large numbers of salt certificates were in a position to dictate the pace of the redemption. They could stop applying for new salt certificates, and therefore stop paying surplus salt silver, in a bid to force the salt administration to redeem old certificates with whatever salt it had. This happened in 1614, halting the collection of surplus salt silver; in 1617 the government sent Yuan Shizhen to Yangzhou, headquarters of the Lianghui salt administration, to work out a solution.

Yuan Shizhen came up with the syndicate system (gangfa 網法). Instead of getting rid of the hoarders as initially promised, Yuan collaborated with them. In order to redeem outstanding certificates on which the surplus salt silver had been collected, while continuing to issue new certificates for new surplus salt silver, Yuan Shizhen granted the hoarders the exclusive and hereditary right to buy salt certificates in return for the exclusive and hereditary responsibility to pay the surplus salt silver.
In Huainan, the syndicate merchants (gangshang 鋼商), i.e., the hoarders, were divided into ten groups, and the government redeemed 200,000 outstanding certificates for one of these groups each year. For that year the government could not collect a single tael of surplus salt silver from this group. At the same time, the government issued new certificates to the other nine groups, collecting new surplus salt silver from them. The beauty of the plan was that the government could pay its outstanding debt to the merchants while continuing to borrow from them. A similar syndicate system was implemented in Huaipei.53

Conclusion

Previous historians noted that momentous changes followed Yuan Shizhen’s reform of the Lianghuai salt monopoly, but it was Ray Huang who pointed out that the Lianghuai salt syndicate system had cancelled a portion of the Ming government’s public debt in return for recognizing the salt merchants’ exclusive and hereditary rights to trade with the government for salt.24 (Huang stopped short of examining if and how salt certificate speculation continued into the syndicate era.)

Under the new system the Salt Syndicate for Southern Huai was composed of ten groups of salt merchants, and Northern Huai of thirteen. The syndicate system began operating in 1617, with the government annually redeeming old certificates for one group each from the two syndicates. By 1629, all two million of the old certificates had been redeemed while new certificates were being issued, and a new syndicate was established for both Southern and Northern Huai in 1630.55 Between 1630 and 1644, when the Ming dynasty fell, the government levied more and more surcharges on the syndicate, in a desperate attempt to pay for its armies. Little else is known about how the syndicate worked during this time. What is known is that the Qing government left the Lianghuai syndicate system nearly intact, allowing it to operate until 1850.26

From the standpoint of both Ming and Qing governments, the syndicate system was a vast improvement over an open, unpredictable market. As well, the Lianghuai Salt Distribution Commission registered syndicate merchants in the same way as a county government registered a commoner, but since the syndicate merchants were less than a few hundred, while commoners in a county could easily number in the tens of thousands, the administrative cost of the syndicate was relatively cheap. Before 1617, the salt certificate market was in theory open to all; after 1617, it was in theory limited to pre-registered merchants. Speculation on the salt certificate must have continued in the Qing, as there is no reason why salt certificates could not be bought and sold between the chief syndicate merchants and their junior partners. But the question of how the Qing Lianghuai syndicate operated deserves its own paper. A more pertinent question here is: why did salt merchants accept the syndicate system in 1617?

The Lianghuai Syndicate system was the result of compromise between the government and the powerful interior merchants known as hoarders. While the idea of salt
certificate speculation may fascinate economic historians, to the merchants involved it was only a means to an end, and the end was to make a profit. As long as they could make a profit, the merchants cared little how the rules changed. The syndicate system granted them exclusive access to the salt trade, and this alone would have been attractive to the hoarders, who had been paying the surplus salt silver for years. But there was another consideration: by 1617, the hoarders did not have much choice. Yuan Shizhen had targeted them as the villains responsible for the collapse of salt monopoly. While merchants in seventeenth-century England could expect to have their interests articulated by members of parliament, could express their views through pamphlets and magazines, and could protect themselves behind a sophisticated institutional network of rights, courts, and charters, the salt certificate hoarders of Yangzhou might have had their lands seized, been whipped, jailed, or exiled, etc. Yuan Shizhen had sworn to deal with them harshly, and they had anticipated his arrival with trepidation. That they later became the backbone of his syndicate system argues that there was a protracted process of lobbying and negotiation between Yuan and the wealthy salt merchants, the details of which remain unknown.27 But we can assume that the hoarders found the syndicate system economically profitable, as well as politically less risky.

The syndicate system benefited both the Ming government and the salt certificate hoarders, but salt certificate speculation must have taken a very different form. The theoretically open public debt market in salt certificates would have become more restrictive, as the very term “syndicate” itself would have indicated. Hsu Hong even regards the Qing syndicate merchants as tax farmers, on account of their bearing the hereditary obligation of paying the surplus salt silver.28 If so, the salt certificate would have become a tax receipt instead of a public debt. In the same vein, David Faure argues that the syndicate system abolished the national debt and rendered the development of banks and credit-bearing instruments even less likely than before.29

But a “what if?” question can have no definite answer. No historian can assert that a public credit system would have emerged in Yangzhou that operated like the seventeenth-century Amsterdam stock and futures market, had the Lianghui Syndicate system not been created. It is true that, from 1617 into late nineteenth century, China did not experience a European-style financial revolution as depicted by Larry Neal, but whether the syndicate system was the major cause of that must remain an open question.

Acknowledgments

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Notes

4. According to Peng Xinwei 彭信威, during the early Hongwu era (1368-1398), the government annually minted 150 million copper coins, or 3 per capita for an empire of 60 million souls; see Peng Xinwei, 1965. This book has recently been translated into English, see Xinwei, 1994. For a recent and comprehensive study, see von Glahn, 1996.
6. Charles Tilly identified three paths to state formation in Europe: coercive-intensive, capital-intensive, and capitalizing coercion; see Tilly, 1992: 60-31. Bruce Carruthers agreed with Tilly’s analysis when studying the development of the British financial system before and after the Glorious Revolution; see Carruthers, 1996: 90.
7. The salt administration section of the “Food and Commodity” chapter in Mingshi, the history of Ming compiled by the Qing government, is a convenient entry into the study of Ming salt monopoly. See Zhang Tingyu 张廷玉 et al., 1974: 1931-39. Wada Sei aeda 談偉士 and his colleagues, when translating the “Food and Commodity” chapter, provided a meticulous annotation that is extremely helpful. See Wada Sei et al., 1957: 399-615. Ray Huang’s chapter on the salt monopoly seems to be the only work in English scholarship that deals with the Ming salt monopoly so far. See Ray Huang, “The Salt Monopoly,” in Huang, 1974: 189-224. For a more recent attempt, see Pak Wing Kiu, 2006.
9. In the first grain-salt exchange scheme for every shi of grain delivered to Datong Granary, or 1.3 to Taiyuan Granary, both in Shanxi, a merchant was paid 200 catties of salt from Lianghuan. See Mingshi, p. 1913. For details of the establishment and early history of the grain-salt exchange, see Hsu Hong 嘉石, 1974: 121-66.
10. The term fuchang is composed of two Chinese characters meaning “to open” and zhong “to obtain.” Its origin can be dated back to the Northern Song dynasty, when the government used to invite merchants to deliver grain to frontier garrisons in return for certificates. The merchants could redeem these certificates for salt, cash, spices, or other precious goods. This practice was known as fuchang, in which n was literally meant “to deliver” and zhong “to obtain,” hence fuchang means “to deliver [grain] and obtain [salt, etc.].” See Tsuutani 西田毅 et al., 1977: 4541. To aid understanding I use a less literal translation: the grain-salt exchange.
17. On levying the surplus salt silver, see Hsu, 1971: 139-64.
19. Quan Hansheng 全漢昇 and Li Longhua 李龍華, 1973: 169-244, especially see table 6, pp. 196-97.
22. Yuan Shihzen, “Yan fa yi yi (the first deliberation on salt administration 講法議一),” in Yuan Shihzen 袁世振, 1617: vol. 47/14: 5268. At this point it is perhaps useful to examine the Amsterdam futures and options market around 1688. According to Joseph de la Vega, ten to twelve powerful speculators formed a ring known as “Cabala” and manipulated the market with false information and other tricks. See de la Vega, 1996: 192.
23. For the syndicate system in Huanan, see Yuan Shihzen, “Gangce fanli (牌照凡例 guide to the syndicate register),” in Yuan Shihzen 袁世振, 1617: vol. 47/14: 5246-47. For the syndicate system in Northern Huai, see Bi Ziyuan’s 博子源 memoir in 1649, in Bi Ziyuan 博子源, 1995: 487: 656.
27. Yuan Shihzen, 1617: vol. 47/14: 148: 1541. Yuan Shihzen described the “hoarders” with blistering contempt, but could not help but reveal that the main syndicate merchants were the very same ones he had referred to as hoarders.
28. Hsu, 1971: 139-64.
Bibliography


Hsu Hong 徐洪. 1975. Mingdai zhongguo shiyuan yuanyao zhida de biaojian 明代中期食源運理制度的變遷. Taide lishi xueshu taide lishi xueshu 台大歷史學會, 2: 139-64.


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