Global crisis and domestic responses: the Qing famine relief 1876-1895

Wenkai He
Assistant Professor
Division of Social Science
Hong Kong University of Science and Technology


Abstract:

By the mid-eighteenth century, Qing China had already established a nation-wide state granary system which contributed greatly to the state’s efforts to relieve famine caused by natural calamities. In the years between 1876 and 1890, however, North China, like many areas around the world, suffered severely from famines following upon the droughts. Why could the Qing state not save millions of its people from starvation as it had done in the eighteenth century? From a global perspective, scholars such as Davis have argued that the expansion of western imperialism and the global market in the nineteenth century severely weakened the Qing state’s capacity for famine relief. This paper tests this explanation by investigating the Qing state’s relief-measures in the specific crises of 1876-1879 and of 1890 against the broader background of interactions between the state, grain markets, and merchants in famine relief since the eighteenth century. It highlights domestic factors such as the practical problems of maintaining the granary system across a vast territory. In particular, this paper examines whether or not China’s increasing integration into the global market in this period provided the Qing state with new ideas or policy tools in coping with famines.

Key Word: Famine relief, ever-normal granary, globalization

I. Introduction:

The period between the 1870s and 1910s is now widely recognized by economic historians as the first age of globalization. Steam ships, railways, and telegraphs not only greatly increased the volumes of global trade but also made the markets in various regions in the world commercially much more integrated than before.¹ For the countries in Asia and Africa

¹ Jeffrey G. Williamson, Globalization and the Poor Periphery before 1950 (Cambridge, MA.: The MIT Press,
which were incorporated in the world economy dominated by western powers, one important question is whether they have benefited from the process of globalization or not.

The world-system scholars contend that these periphery countries in the world economy were exploited by the core capitalist countries and thus would not be able to catch up with the core counties.\textsuperscript{2} The modernization theorists argue that integration into the global economy is a necessary condition, if not a sufficient one, for developing counties to achieve sustained economic growth. The rapid industrialization of Japan after the Meiji Restoration of 1868 is often taken by modernization theorists as an example of catching up by learning from the west.\textsuperscript{3} Despite of their opposing conclusions, both schools pay inadequate attention to how different domestic institutions of non-western countries led to different kinds of interactions with the global economy and then varied outcomes, which is a crucial theme in the study of contemporary globalization.\textsuperscript{4}

The re-discovery of great famines in the world in the second half of the nineteenth century casts new lights on the relationship between the global economy and domestic reactions. Political ecologists use an estimated 30 million to 60 million victims in the famines in India, China, and Brazil in the periods of 1876-79 and 1896-1902, not included death rates in Sudan and Ethiopia, to illustrate the great danger for non-western countries to be incorporated into the world economy. Both the number of subsistence crises and their scale contrasted sharply with the rise of living standard and disappearance of famine in western countries in the

\footnotesize{2 Reference of dependence theory
\textsuperscript{4} For the emphasis on the multiplicity of results from the interactions between different domestic institutions with the global economy in historical institutionalists’ study of contemporary globalization, see Suzanne Berger and Ronald Dore, eds., \textit{National Diversity and Global Capitalism} (Ithaca: Cornell University Press, 1996); J. Rogers Hollingsworth and Robert Boyer, eds., \textit{Contemporary Capitalism: The Embeddedness of Institutions} (Cambridge: Cambridge University Press, 1997); and Peter A. Hall and David Soskice, eds., \textit{Varieties of Capitalism} (Oxford: Oxford University Press, 2001).}
second half of the nineteenth century. What at the issue is whether or not the economic progress of the capitalistic countries was made rest upon the sacrifice or suffering of the periphery countries in Asia and Africa? In other words, the subsistence crisis in Asia and Africa in the first globalization of the late nineteenth century was to a large extent caused by the expansion of western economy. Or is occurrence of these great famines a pure coincidence with the expansion of the west in the same period? In other words, the natural disasters produced by the El Niño between the 1870s and 1890s would have still killed the same number of people in Asia and Africa had the west not expanded into other parts of the world?

In Davis’ view, the synchronous droughts and big floods that the El Niño had produced in India, China, and Brazil in the periods of 1876-79 and 1896-1902 are not the only cause of the massive death rates in famines in these regions. Following Amartya Sen’s argument that the lack of institutions to distribute available food to the needy rather than the absolute scarcity is the cause of famines, Davis holds the expansion of western market economy and imperialism as crucial to turn the natural calamities into human disasters. The major mechanism is that western imperialism destroyed the native socio-political institutions of non-western countries which could have saved the life of starving population in natural disasters. This deadly theme unfolded differently in various circumstances. In the case of India, the British colonial government still exported huge volumes of grain to England despite of the demand for food in disaster areas. For China, the state capacity and financial resources of the Qing government were severely weakened by western powers, which made it unable to conduct effective famine relief as it did in the eighteenth century.

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The case of Qing China is important to Davis’ theory for two reasons. First, unlike India which was the British colony at the time, the Qing state was still a sovereign state in domestic governance, though it could not determine its tariff duties due to the unequal treaties with western powers. Davis’ argument would be general if he can demonstrate that the expansion of global market was responsible for turning major natural disasters into great famines in both India and China. Second, Davis uses the case of the Qing China to conduct a “natural experiment” to address the counterfactual question about what could have happened to Qing in the calamity of 1876-79 if there had been no western imperialism in Asia. For this purpose, Davis draw from recent studies on the ever-normal granary system that the Qing state had established in the eighteenth century and show how capable that the eighteenth-century Chinese state was in organizing famine relief in North China struck by severe droughts between 1743 and 1744.\textsuperscript{7} However, in the big droughts in North China between 1876 and 1879, the Qing state which had been weakened since the Opium War in 1842 did not have adequate money or granary grains to replicate its own success in the eighteenth century.

This is not a perfect “natural experiment” for comparative historians.\textsuperscript{8} For example, the degree and duration of droughts are different in North China in 1743-44 and 1876-1879, the former lasted only one year yet the latter almost two consecutive years. Meanwhile, the disaster areas in North China in 1743-44 were close to river routes while many disaster regions in 1876-79 located in mountainous areas in Shanxi and Shaanxi provinces with awful transportation facilities. Nonetheless, Davis’ comparison of the two disasters is important because the outcomes of the two famines are dramatic. In the famine in 1876-79, an estimated 15 to 20 million people died in starvation while in the substance crisis in Zhili in

\textsuperscript{7} Davis, \textit{Late Victorian Holocausits}, p. 280.

\textsuperscript{8} For the natural experiment as a methodology in historical studies, see Jared Diamond and James Robinson, eds., \textit{Natural Experiments of History} (Cambridge, MA.: The Belknap Press of Harvard University Press, 2010).
1743-44, the Qing government was able to provide relief food to an estimated 2 million people for eight months.\(^9\) The implication of this comparison is that had the Qing government in the 1876-79 possessed the resources and state capacity that it had in 1743, the death toll would have been much lower.

However, in this “natural experiment” of comparative history, Davis mainly attributed the success of relief campaign to state capacity in eighteenth-century China, as demonstrated particularly by the nation-wide ever-normal granary funded and managed by the Qing government. Davis had paid scant attention to the practical problems in maintain a massive state granary system such as how to avoid spoilage of the stored grain and how to re-stock granaries without disrupting market transactions. These problems had prompted Qing officials after the mid-eighteenth century to consider alternative options in famine relief, such as to store money instead of grain and to use profit incentives to attract private grain merchants to participate into the famine relief organized by the state. Negligence of these important changes in state granary institution and state-market interactions in the late eighteenth and early nineteenth century may lead to a distorted understanding of the Qing officials’ attitudes toward the world economy after 1840. It may also lead to an underestimation of the positive benefits for China’s entry into the world market in the second half of the nineteenth century.

In this paper, I examine China’s integration in the global market in the late nineteen century against the domestic changes in the state granary system and the state-market relations prior to the coming of westerners. Market economy is by no means of western thing. Economic historians have convincingly demonstrated the vibrant development of market economy in

both Japan and China over the long eighteenth century. These included increasing commercialization of agricultural production; proto-industrialization in the economic core areas (the Lower Yangzi Delta in China and the Kinai region in Japan); the expansion of the urban economy; the growth of inter-regional long-distance trading of staple goods such as grain, cotton cloth, silk, and so on, which gave birth to a unified national market and further stimulated regional division of labor; *de facto* labor mobility; and the rise of merchants whose money-making activities were seen as morally legitimate.  

The Qing government from the mid-eighteenth century on had adopted many market-friendly policies on issues such as the grain trade, coal mining, and monetary issues, which reflected an increasing recognition among government officials of the importance of the market. In relief campaigns, one noticeable trend from the 1740s onward was the increasing use of money rather than grain to help the disaster areas. The development of domestic grain markets was indispensable to these policy changes in famine relief. In the meantime, the Qing government had tried to encourage rice-imports into China by various policies such as reduction or even exemption of taxes on imported rice. Nonetheless, neither the development of domestic grain markets nor the scale of international trades of rice in Asia by the late nineteenth century was adequate enough for the Qing government to rely upon the markets to

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combat against famines. In this situation, the state’s involvement was still crucial in overcoming substance crisis when major natural disasters occurred. The Qing state’s anti-famine measures and their moral justifications are very similar to those used by the English state by the late seventeenth century when the development of grain markets and the agricultural productivity in England were not adequate enough to free the state from the responsibility of famine relief.

When evaluating the effectiveness of state’s participation in famine relief, we should not only consider the direct measures such as the government relief funds or relief grains. As the moral basis of the Qing state to legitimate itself through famine relief is to maintain social stability and safeguard basic welfare of the people, it did not attempt to monopolize famine relief efforts. Instead, since the eighteenth century, the Qing government had increasingly encouraged merchants and gentry to participate in famine relief. These private charity activities in substance crisis emerged first at local initiatives to supplement the state efforts. Nonetheless, after the 1870s, both the scale and scope of private charity increased significantly as cross-regional networks in fighting against famine became extended. We would underestimate the ability of the Qing state to fight against substance crisis in the late nineteenth century if we neglect these state-supported social activities in famine relief.

Against the background of domestic institutional changes in famine relief in China since the eighteenth century and the conditions of the international trade of grain in Asia in the first globalization, we may re-consider the relationship between the great famine in China between 1876 and 1879 and the impact of the first globalization.

The structure of this paper goes as follows. In section II, I briefly describe the practical problems which had beset the Qing government in maintaining a nation-wide ever-normal
granary system and the alternative solutions. In section III, I examine the changing patterns in famine relief in the first half of the nineteenth century. Against this background, I will examine the efforts to save people in the great calamity of 1876-79 and I argue that several channels through which China would have benefited from increasing interactions with the world economy in fight famines.

II. State and markets in famine relief in China since the late eighteenth century:

Despite the economic progress and steady population growth in the eighteenth century, Chinese peasants were vulnerable to frequent natural disasters occurred in China. As big floods or droughts often struck more than 400 counties and prefectures while a minor one 30 counties, natural calamities immediately put millions of people in the danger of famine. Community granary managed by local governments or charity granaries which were funded and managed by local gentry or merchants could only help local residents in bad years and did not have the capacity to launch cross-regions famine relief. In contrast, the ever-normal granary system was funded by the state and managed by government officials, and it thus had much larger resources than private charity to mitigate the human suffering caused by major calamities.

Both the scale and total amount of stored grains of the ever-normal granary reached the peak in Qing China in the eighteenth century. The Qing government established one ever-normal granary in every 1,300 counties. The official quota of stored grain for a big county is 10,000 – 20,000 shi of unhusked grain; 8000-10,000 shi for a medium county, and 2,000 to 6,000 shi for a small county. The total amount stored grain in the whole system reached a peak in the 1740s, about 30 to 40 million shi. These state granaries had a function of leveling grain

12 During the Qing history (1644-1911), the total number of recorded big floods is 16,384 and the number of draughts is 9,185.
prices. For example, they were supposed to purchase grains from the market when the prices were low in years of good harvests. When grain prices became high in years of scarcity, they should sell the stored grain at below-market prices. If a major natural disaster struck several regions, the stored grains in the granaries became the most important means for the state to provide relief food to starving population in times of famine.

The Qing government took famine relief as one the most important ways to legitimate its governance and thence it devoted much efforts and fund to maintain the ever-normal granary. The total amount stored grain in the whole system reached a peak in the 1740s, about 30 to 40 million shi. When one big flood or drought threatened the survival of millions people, the Qing government could transport the stored grain from granaries in areas no affected by the calamity to help the struck regions. Moreover, the Qing government could also use the annual 3.5 million tribute grains and some 6-10 million shi of husked rice stored in the granaries of its tribute grain system to provide famine relief. In the famine relief in Zhili in 1743-4, for example, more than half of the total grain supplied to the disaster areas came from the tribute grains from the south. The great scale of interregional transfer of grains in state granaries coordinated by the center to save people from famine was unprecedented in the pre-modern world history.

However, there were constant debates among officials over the quantity and function of the ever-normal granary system when it was at its high days in the mid-eighteenth century. In the great policy debates in the 1740s, many governors pointed out that the ever-normal granary might be counterproductive in its efforts to stabilize grain prices as both the quantity of grain

stored in state system and state purchases of grain to stock its granary system led to a scarcity of grain supply in the markets, and thus drove up prices even in years of good harvest.\textsuperscript{16} Of course, there were some deeper causes of the steady inflation in eighteenth-century China of which these officials were unaware at the time, such as population growth and massive inflows of silver into China. Nonetheless, their worries did reflect the difficulty for the state to maintain a large scale of nation-wide granary system in an economy with very low degree of commercialization in grain production and transactions.

Moreover, the practical problem to maintain granary system was a huge headache to Qing officials who did not possess the modern storage technology. In order to avoid the spoilage of stored grain, a magistrate was required to sell 30 percent of the granary grains in every spring and re-stock in the following autumn-winter. In southern provinces with warm and humid climate, this prescribed turn-over rates were far from adequate to prevent grain from rotting. The Qing government in the early nineteenth century had to allow various turn-over rates in different provinces.\textsuperscript{17} Even in this situation, magistrates still found it difficult to maintain the target of storage mandated by the center. Resources transferred from the central government such as tax relieves and famine relief funds to disaster stricken areas may further de-motivate local officials to maintain the storage according to the official quota.\textsuperscript{18}

Nonetheless, the difficulty to maintain granary reserves was closely connected to the difficulties that local officials encountered in buying grains from the markets. When a granary was depleted after selling out to stabilize grain prices, or lending to peasants in need,

\textsuperscript{16} Helen Dunstan, \textit{State or Merchants? Political Economy and Political Process in 1740s China} (Cambridge, MA.: Harvard University Asia Center, 2006), chapter
or distributing food for famine relief, magistrates needed to replenish reserves on time. However, this depended upon the conditions of harvests over which officials had no control. If local markets did not have the needed volumes or the prices still remained high, officials looked for markets in nearby markets. Nonetheless, the fixed quota of annual expenditures did not give magistrates adequate money to cover the additional transportation cost. Although the Qing government encouraged the local gentry to contribute grain to fill state granaries in return for receiving officials titles, this is far from enough to maintain state granary system. In this situation, if magistrates were pressured by their superiors to restock granaries, they forced merchants to sell grain at prices much lower than the market ones. Such extortive “purchases” caused much social disturbance which the center or provincial governors had to intervene.19

In addition to the above difficulties to refill granaries in kind, local officials had strong incentives to store silver rather than grains. On the one hand, silver did not rot as easily as grain. On the other hand, a magistrate could use the stored silver to cover urgent deficits for other public expenditures, and return money back to this item of granary-silver (jiayin) at later time. The Qing government imposed a strict “post-transfer audit” upon the magistrate who managed the state granary, and the predecessor was held accountable if his successor found deficits in storage. The central government also ordered governors to conduct special audits of granary reserves to discipline magistrates. However, due to the practical difficulties to manage state granaries, governors and magistrates had little motivation to enforce the maintenance of official storage quota of grains, especially when the successive official shared with his predecessor of the importance of storing silver rather than real grains.20

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20 Pierre-Étienne Will and R. Bin Wong, Nourish the People, chapter 7.
In consequence, over the course of the eighteenth century, officials increasingly stored silver instead of real grain the trend to store silver instead of real grains for state granaries. As Pierre-Étienne Will points out, the quantity of stored grains in ever-normal granaries declined steadily in the first half of the nineteenth century, and by 1831 even the Daoguang emperor had noticed that the actual reserves of granaries were so short of the theoretical quotas that they became insignificant in providing relief food in times of disasters. In addition to appealing to diverting “tribute grains” for mitigating famines, governors increasingly depended upon the use of money to organize relief campaigns.21

The development of inter-regional grain markets in eighteenth-century China was vitally important to increasing use of silver to replace grain in the granary system. According to Wang Yeh-chien, Grain-exporting provinces included Anhui, Jiangxi, Hunan, Sichuan, Guangxi, Shaanxi, Henan, and Fengtian in Manchuria. Food importing areas were Zhili, Shanxi, Guangdong. Yunnan, Guizhou and Gansu were self-sufficient provinces. The economic developed cores in China such as the Lower Yangzi delta and the Pearl River delta heavily depended upon imported grains. The cross-region grain trades were mainly carried out through the Yangzi River, the Grand Canal, and the coastal seaborne transportation connecting Fengtian with Tianjin and Southeast provinces such as Guangdong and Fujian. In the second half of the eighteenth century, the estimated annual quantity of grains shipped from upper and middle Yangzi River to lower Yangzi delta is between 15 to 20 million shi, 5-6 million shi from the Southern provinces to Beijing and Tianjin through the Grand Canal. The annual volume of soy beans and other commodities transported from Manchuria to South is estimated as 10 million shi.22 In addition to the interregional long-distance grain trades,

when we include the quantities of intra-regional grain trades, the total amount of grain in market transactions is estimated between 200 to 300 million shi.\(^{23}\)

In the debates about the appropriate scale of state granary system in the 1740s, many officials suggested store more silver than actual grain for the granary system. They appreciated the contribution of inter-regional grain trade to the welfare of the people. In the words of Guangdong governor Celeng, “those things which impede the grain trade should all be done away with. … Commercial transactions may flow free and grain among the populace becoming day by day more plentiful. [and prices will go down gradually].”\(^{24}\) Qianlong emperor himself also emphasized the importance to ensure the cross-regional “natural circulation” of grains unimpeded by administrative regulations. In an imperial edict of 1742, Qianlong particularly prohibited export embargos attempted by some governors. “Given the vastness of the Empire and the distinctiveness of its component territories, if the harvest is poor in one place, it may be good in another. The whole reliance is on intercourse between want and possession, and aid alike to all in times of crisis. [sic] If merchants converge like spokes into a wheel on regions where the harvest has been good, once they have much grain assembled, the price will naturally come down, and it will be easy for the needy masses to acquire food. [sic] That merchants and trades may circulate, drawing upon excess so as to supplement paucity, in order to relieve the difficulties of a single time.”\(^{25}\)

The development of both inter-regional and local grain trades provided the Qing officials with some important indirect relief measures rather than the direct distribution of grains to

\(^{23}\) Cited from Dunstan, State or Merchant?, p. 163.

\(^{24}\) Robert Marks, Tigers, Rice, Silk, and Silt: Environment and Economy in Late Imperial South China (New York: Cambridge University Press, 1997), p. 246.

calamity-stricken areas. In addition to appealing to diverting “tribute grains” for mitigating famines, governors increasingly depended upon the use of money to organize relief campaigns. One was to send relief fund rather than grains to disaster areas or to repair public projects in these areas so that the hungry people could earn wages to buy food (*yigong daizhen*). The other method was to exempt transit taxes on the grains shipped to disaster areas by merchants. In some cases, instead of sending commissioners to use official fund to purchase from major grain-exporting provinces, the Qing government handed over government money to private merchants and asked them to purchase and then ship grains to government assigned disaster stricken areas.\(^\text{26}\)

In eighteenth-century China, in a sharp contrast to the government’s encouragement of “free circulation” of grains within territory, the Qing government strictly prohibited food exports for two reasons. On the one hand, Qing officials were concerned that grain-outflows would drive up domestic food prices. On the other hand, the government wanted to cut off food supply to marine bandits or pirates, who could be politically dangerous. In contrast to the strict prohibition of grain outflows or exports, the Qing state was happy to receive grain supply from overseas. The Qing government tried to use special policies to encourage food importation.

For example, in the ninth month of 1742, Qianlong emperor exempted all the taxes from the Siamese merchants who shipped rice to Fujian. In order to encourage foreign merchants to continue this business, he further announced in an imperial edict in 1743 that thereafter any foreigner who came to trade in Guangdong and Fujian, the taxes levied upon their commodities would be deducted by half if they carried above 10,000 shi rice, or by 30

\(^{26}\) For the trend toward collaborating with merchants and markets in famine relief, see Pierre-Étienne Will, *Bureaucracy and Famine in Eighteenth-Century China*, pp. 295-7.
percent if above 5,000 shi. They could sell the shipped rice in local markets according to the market prices. If local rice prices were low, government officials would purchase as reserves of state granaries. In 1746, one Siamese merchant carried 4,300 shi of rice while the other Siamese merchant 3,800 shi or rice to Fuzhou. Although both were less than 5,000 shi, the Qing government still granted them a deduction of 20 percent of taxes on the commodities they shipped to China. In 1824, the Qing court further allowed foreign merchants who brought rice to China to purchase Chinese goods returning home, lest they did not have blast in ships. When the food prices were high in Guangzhou during the drought of 1741-42, Guangdong governor Wang Anguo managed to import 23,000 shi of rice from Siam with government fund.

Nonetheless, annual grain imported to Guangdong and Fujian from Annam (Vietnam) and Siam (Thai) is estimated at the scale of 400,000 shi every year, which is quite insignificant compared with the quantity of domestic grain trade. The profit of importing rice from Siam did not seem big enough to attract Chinese merchants, who were more interested in buying Siamese timbers. In the meantime, the output of major rice growing countries in Southeast Asia was not big enough for China to import rice at large scale. For example, the proportion of exported rice in the total output in Siam was usually at 2-3 percent, never exceed 5 percent by 1850.

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27 The Veritable Records of Gaozong (Qianlong), vol. 200, QL8-month9-甲申.
28 The Veritable Records of Gaozong (Qianlong), vol. 275, QL 11-month 9-戊午.
29 The Veritable Records of Xuangzong (Daoguang), vol. 66, date DG4-month3-戊辰
30 Cited from Marks, Tigers, Rice, Silk, and Silt, p. 255.
32 According to the memorial of Fujian governor Chen Dashou, “暹罗产米甚多，向例原准贸易。向来获利甚微，兴贩者少。”The Veritable Records of Gaozong (Qianlong), vol. 275.
33 Jennifer W. Cushman, Fields from the Sea: Chinese Junk Trade with Siam during the Late Eighteenth and Early Nineteenth centuries (Ithaca: Southeast Asia Program, the Cornell University Press, 1993), p. 92.
The decline of stocks of ever-normal granaries and the increasing use of indirect economic means were two major institutional changes in famine relief in Qing China in the late eighteenth century. Entering the nineteenth century, due to changes in climate and environment, natural calamities occurred in nineteenth century China more frequently than in the eighteenth century. Between 1644 and 1820, the number of disasters recorded in the Veritable Records is 19 annually, but 32 in the period between 1820 and 1911.\(^\text{34}\) Facing famines caused by these disasters, could the Qing government effectively align profit motivation of private merchants with the public good of saving people from famine? Or the state’s direct participation in famine relief as still necessary to prevent escalating death rates during calamity-produced substance crisis? I turn to next section to discuss these questions.

III. The State, market, and society in famine relief between 1800 and 1890:

How did the state’s direct means work together with the market-oriented indirect methods in providing famine relief in the nineteenth century? In the summer of 1801, Zhili province experienced a big flood and an estimated 90 counties were affected between the summer of 1801 and the spring of 1802. The Qing government distributed 600,000 shi of the tribute grains and allocated 1.5 million taels of silver as relief fund. Moreover, it spent more than 1 million taels of silver for repairing river banks which would allow people affected by flood a change to earn wages so as to purchase food from the markets.\(^\text{35}\) In historian Lillian Li’s view, this famine relief was quite effective and mortality rates were low.\(^\text{36}\)

In this famine relief, reserves of ever-normal granaries in Zhili province were insignificant, which suggested a large deficit in storage. Government spending of relief fund and


\(^\text{35}\) Lilliam M. Li, Lilian Li, Fighting Famine in North China, p. 251

\(^\text{36}\) Lilliam M. Li, Lilian Li, Fighting Famine in North China, p. 255.
exemption of transit-taxes also encouraged merchants to ship grains to disaster areas. Nonetheless, the government did not rely completely on the market but order officials to purchase 100,000 shi of wheat from Shandong and 50,000 shi of mullet from Henan where prices were low due to good harvests. In order to have sufficient reserves to sell at below-market prices in the spring of 1802, the government further sent commissioners to purchase 300,000 shi of rice from Shandong and Henan, and from Fengtian 100,000 shi of rice and 50,000 shi of sorghum. In the meantime, the Qing government also realized that profit incentives were not strong enough to attract merchants to ship grains from south to northern China. For example, in 1824 the Fujian governor Sun Erzhun memorialized to the Court that when merchants shipped the grains purchased in Taiwan to Tianjin, they found that local grain prices were low due to good harvest in Zhili, which made it unprofitable for them to sell grains in local markets. Moreover, Sun pointed out that merchants incurred additional cost by waiting for the autumn monsoon for returning. In response, the Court decided to use official funds to purchase these grains at above-market prices and to exempt taxes on the commodities which merchants carried back to South.

The importance of government purchase of grains to famine relief in Zhili province indicated that the market mechanism in nineteenth-century China were not developed enough for the state to only use indirect measures when major calamity struck. This was not unique to North China. In Guangdong where an efficient grain market had developed to import rice from Guangxi and Hunan provinces to feed the large urban population in Guangzhou and Foshan and peasants specialized in cash-crops in Pearl River Delta. In this highly integrate grain market of Lingnan, merchants had dominated grain shipment from the second half of the

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37 “惠龄奏：于查灾时，见沿河商船多系装载粮食，赴直贩卖。”The Veritable Records of Renzong (Jiaqing), vol. 85, JQ6-month 7-辛丑
38 The Veritable Records of Renzong (Jiaqing), vol. 86, JQ6-month 8-庚申
39 The Veritable Records of Xuanzong (Daoguang), vol. 72, DG4-month8-甲子
eighteenth century on.\textsuperscript{40} However, when Lingnan suffered from a major drought in 1786-87, the provincial government had to purchase rice from Lower Yangzi Delta to distribute to the hungry people. But many died in of starvation.\textsuperscript{41} Likewise, when Guangzhou suffered from floods and rice prices soared up in 1833, instead of relying upon the market mechanism, the provincial government had to dispense official fund to purchase grains from Guangxi province and overseas (probably from Southeast Asia).\textsuperscript{42}

Despite the practical difficulties in managing ever-normal granaries and large deficits in storage in state granaries in the nineteenth century, there is evidence to show that provincial governors still managed to fill the deficits in reserves when market prices were low due to good harvests. Even in Guangdong province where climate was unfavorable to storing the targeted quotas of state granaries, the Guangdong governor in 1829 purchased 1,067,000 shi of grain to replenish the deficit of 1,300,000 shi.\textsuperscript{43} In 1837 good harvests in Jiangnan, Zhejiang, and Jiangxi drove market prices of unhusked rice to 5-6 qian per shi, which were the lowest in 10 years, the Jiangxi province then purchased to refill up to 70-80 percent of deficits in ever-normal granaries.\textsuperscript{44} Nonetheless, local officials rather than the central government had the full discretion to decide timing and quantity to purchase grains to refill state granaries according to the circumstances of markets and transportation costs.

In addition to the combined use of indirect and direct measures to provide relief food to disaster-stricken regions, one important change in famine relief in the nineteenth century was that gentry and merchants increasingly involved in famine relief process. In nineteenth

\textsuperscript{40} Robert Marks, \textit{Tigers, Rice, Silk, and Silt}, pp.258-64.
\textsuperscript{42} The Veritable Records of Xuanzong (Daoguang), vol. 244. DG 13-month 10-甲辰
\textsuperscript{43} The memorial of Li Hongbing, in The Veritable Records of Xuanzong (Daoguang), DG9-month12-甲戊
\textsuperscript{44} The memorial of Jiangxi governor Yutai, in The Veritable Records of Xuanzong (Daoguang), DG18-month1-乙未
century, the number of charity granaries funded and managed by local merchants and gentry increased both in North and South.\textsuperscript{45} The quantity of stored grain in an individual charity granary was not big. Moreover, the relief efforts of a charity granary were usually limited within the community of donators. Although the Qing government encouraged merchants and gentry to establish charity granary, it did not try to coordinate charity granaries in different regions in famine relief. In contrast to the trans-regional movements of the grains stored in ever-normal granaries under the central coordination, the Qing government did not allow local officials to use reserves in one charity granary to help starving people in other communities.\textsuperscript{46}

Nonetheless, charity granaries were more efficiently managed than state granaries. When they became widely scattered in urban areas and major market towns, their contribution to famine relief became more significant. For example, when Hanzhou, Jiangxing, and Huzhou suffered from a big flood in 1823, a state-organized relief lasted for four months and then was followed by privately organized relief for three months. The total quantity of relief rice provided by merchants and gentry in disaster-stricken Suzhou, Songjiang, and Taicang in 1823 reached 15,400 shi, which was bigger than the 3,360 shi supplied by state granaries.\textsuperscript{47}

In the process of distributing relief money and food to the people in disaster areas, the Qing government also sought help from local gentry so as to curb corruptions and embezzlements of officials or their runners and clerks.

A brief examination of famine relief in China in the first half of the nineteenth century suggests several changes. First, despite of declining storage of ever-normal granaries and

\textsuperscript{45} For the charity granary in Zhili in 1814, see Zhang Yanli, \textit{Jia-Dao shiqi de zaihuang yu shehui} (Beijing: Renmin chubanshe, 2008), p. 107; For the Lower Yangzi Delta, see Wu Tao.

\textsuperscript{46} “义谷系民捐之项，与常平仓谷不同，自未便以此境之有余，勒令济邻境之不足。” Imperial Edict, in \textit{The Veritable Records of Xuanzong (Daoguang)}, vol. 233, DG13-month3-甲申

government’s financial resources, the state remained the most important player in organizing cross-regional relief campaigns when major disasters occurred. Second, both government direct purchase of grains from surplus areas and merchants’ shipments were important to provide relief food to regions suffered from calamities. And both were under the constraint of transportation conditions. When the entire Henan province encountered a severe drought in 1847, the grains that government purchased in Jiangsu were shipped to Henan through the Grand Canal.48

The Qing government’s interest in acquire grains supply from overseas remained in the nineteenth century. During the Taiping Rebellion in the 1850s, the tribute grain to Beijing along the Grand Canal was cut off in 1853 when the Taiping forces occupied Yangzhou. This situation made the Qing court more interested in importing rice from overseas. The court urged the Guangdong provincial authorities to purchase imported rice and send it to Beijing via seaborne routes to cover the deficit in tribute grain from the Lower Yangzi Delta.49 In the 1860s, the effort to use overseas rice imported via Guangdong and Fujian to supply the population in Beijing continued.50

The collaboration between state resources and social forces seen in forms such as charity granaries in the nineteenth century contrasted sharply with the dominant role of the state in famine relief in the eighteenth century. These domestic changes and the emerging global economy after the 1870s constitute the background against which we must examine the relief measures taken in the great famine in North China between 1876 and 1879. The drought in Shanxi, Shaanxi, Henan, Zhili, and Shandong in these years was, in Davis’ terms, “a 200-year

48 The Veritable Records of Xuanzong (Daoguang), vol. 445, DG 27-month 8-辛酉
49 The Veritable Records of Wenzong (Xianfeng), vol. 119, XF4-month1-甲子; vol. 121, XF4-month2-辛巳
50 The Veritable Records of Muzong (Tongzhi), vol. 53, TZ1-month 12-乙亥
or even 500-year frequency event”. At the same time, southern provinces such Guangdong and Fujian suffered heavy rains and floods. The occurrence of disasters simultaneously in so many different regions had a strong negative impact on the possibility of shipping grain from areas of surplus to those stricken by calamity. For example, output in the major grain-producing areas in Inner Mongolia, which was a major grain supplier to Shanxi province, dropped considerably from 1876 to 1879.

Given the magnitude of the famine, the Qing government’s financial resources and administrative capacity were quite low. The amount of silver stored in the central government in the 1870s was only about 1 million taels, much less than the 70 to 80 million tales common during the eighteenth century. Many ever-normal granaries in Shanxi and Shaanxi were in fact empty when the disaster struck. Nonetheless, we should not underestimate the ability of the government and gentry organizations to mobilize money and grains. Money was raised through government direct allocation, traditional contributions from gentry in return for official titles (juanna), and charitable donations from both domestic and overseas Chinese. The total amount raised for Shanxi province alone amounted to more than 20 million taels of silver, consisting of 15,779,961 taels of silver, 276,557,700 wen of copper coins, and 1,029,851 shi of grains.51

In the famine relief between 1876 and 1879, large cross-regional charity activities were organized for the first time in China.52 Merchants and gentry in the Lower Yangzi Delta not only actively raised relief grain and money but also managed its shipment and distribution. The total relief fund raised by Lower Yangzi gentry amounted to more than 1 million taels,
and distributed to more than 1 million people in Shandong, Henan, Shanxi, and Zhili.\textsuperscript{53} The resources and capacities of private charity organizations continued to grow after 1879, and their role in famine relief became equivalent to, or even more important than, that of the government. Some Qing officials in the 1880s even admitted that charity organizations centered in Shanghai were more resourceful and better organized than the financially depleted provincial governments in providing famine relief in major disasters.\textsuperscript{54} Meanwhile, overseas Chinese made significant contribution in both money and kind to help the victims of disasters. Although the Qing government considered charity efforts made by western missionaries politically suspicious and refused to accept donation offered by foreign governments, it welcomed donation from overseas Chinese.

Given this tremendous response on the part of society, how do we account for the staggering mortality? In this case, the lack of proper inland transportation facilities was mainly responsible. Both the Qing government and private merchants were able to use steam ships to ship a large amount of relief grain from Fengtian and southern provinces to Tianjin. Disaster areas in Zhili, Henan, and Shandong which could be reached by river routes benefited significantly from these relief grains. However, transporting the grain overland to Shanxi and Shaanxi was extremely expensive and slow. After 1879, advocates of railways cited this tragedy to emphasize the importance of building railroads in China.\textsuperscript{55}

\textbf{IV. Concluding points:}

Domestic institutions matter for the study of the first globalization. The sovereign state such as the Qing behaved differently from the British colonial government in India in times of

\textsuperscript{55} Ho Hon-wai, \textit{Guangxu chunian (1876-1879) huabei de dahanzai}, chapter 5.
famine as the former took famine relief as a vital means to legitimate state power. The importance to save life during substance crisis of big famines is shared by both the state actors and social elites. In late Qing China, the state actively encouraged merchants and gentry to not only contribute money and foods but also directly manage and organize cross-region famine relieves. In this light, it is too narrow to only use the state resources available for famine relives to measure the Qing state’s ability to combat big natural disasters in the late nineteenth century. The collaboration of the state and private charity organizations could mobilize tremendous resources to save people’s life in subsistence crisis in natural disasters.

As countries such Siam and Burma increased significantly the volume of their rice exportation, and the steam ships had reduced the costs of transporting grains across oceans, how would the Qing officials react to these new circumstances in the late nineteenth century? An examination of their attitudes toward importing overseas rice in the eighteenth and nineteenth centuries provides a clue to this question. Qing officials would welcome cheaper overseas rice to feed its population in normal times and to help famine relives in times of domestic calamities. To join the world market did not imply economic exploitation only for contemporary Chinese officials. A study of economic globalization thus needs to consider adequately domestic institutions and domestic economic calculations.