Public Interest and Water Control Financing in Qing China, 1790-1840

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Abstract:

River works constituted the largest civil expenditure of the Qing state. The Yellow River and Grand Canal conservancy efforts were both funded and managed by the center. Important tasks such as construction and maintenance of river banks and irrigation initiatives were funded by the central government but managed by relevant provincial governments. This paper examines the projects were either funded by the central government but managed by local communities under the supervision of the government (guandu minban) or completely funded and managed by the people (minban). When the fiscal situation of the Qing government became deteriorated in the first half of the nineteenth century, the distribution of the financial burden began to change. In some regions in the Lower Yangzi Delta, the state actively encouraged local merchants and gentry to support works which had been previously funded by the state. In contrast, in many regions in Northern China, the state began to shoulder the rising costs of projects which were originally funded and managed by local people. These different patterns suggest that a simple explanation of the need to reduce state expenditure when the Qing state became fiscally impoverished is insufficient. This paper reviews the process by which financial and management responsibilities were reallocated and examines how the concept of public interest was deployed by state and social actors in such negotiations. It argues that the importance of legitimating state power rather than reduction of state spending accounts for the two different patterns.

Key Words: financing, hydraulic projects, state legitimation

Introduction

The monopoly of legitimate use of coercive force over a delimited territory is the defining feature of the state. Studies of state formation in political science and sociology have often focused upon how and why states developed centralized institutions to extract revenues for fighting wars.¹ Nonetheless, this scholarship has paid scant attention to the legitimation of

¹ For the emphasis on the role of warfare in state building, see Charles Tilly, ed., The Formation of National States in Western Europe (Princeton: Princeton University Press, 1975); idem, Coercion, Capital, and European
state power through non-violent means. Recent studies of state formation in early modern Europe have emphasized that, by the late sixteenth century, domestic governance had become at least as important as international war in the institutional development of the state. With the increasing institutionalization of the state apparatus, the early modern state had become an “impersonal political authority” which is separate from the monarch as a person.2

In this situation, where neither the personal charisma of the monarch nor the divine source of the ruler’s power could justify the state’s coercive power, state actors turned to general terms such as the public welfare or public interest. Even pro-absolutist political thinkers in seventeenth-century Western Europe such as Grotius and Hobbes admitted that the coercive power of the state must be legitimated by its ability to guard the common good or public welfare.3 Although such a legitimation of state power was still conceived in paternalist terms—a benevolent patriarch taking care of the welfare of his subjects—it had to be embodied in concrete social policies involving the maintenance of social order, poor relief, public works, and even plague prevention.4

The legitimation of state power through the safeguarding of public interest is a common theme across early modern and modern states in spite of significant differences in their

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economic and political institutions. Historical institutionalists have demonstrated that the capacity of state actors to set policy goals which are not captured by the particular or special interests of certain powerful social groups such as big landlords or industrial monopolists is an indispensable condition for socio-economic development. However, state autonomy so defined does not appear robust because one can always identify certain social groups that benefit from these major policy decisions.

In contrast, the legitimation of state coercive power by safeguarding public interest can provide a solid basis for state autonomy. State actors can be independent from the particularized interests of social groups or classes either when their policy goals aim to serve the general good of society—economic development or environmental protection, for example—or when the state behaves as an impartial arbitrator in conflicts of interests among different social groups. State autonomy conceived in these terms is even reflected in the attempts of state actors to reframe the particularized interests of special groups as forms of “public interest.” In practice, a state autonomy built upon the normative basis of public goods can be attained at different administrative levels of governance, ranging from the local to the central. Nonetheless, in regard to cross-regional conflicts involving the particular interests of various social groups, the central government, which is the ultimate source of the legitimation of the use of political power within the territory of the state, constitutes an important unit in any examination of state autonomy.


This paper takes up the question of the public interest as a normative basis for state coercive power in a particular early modern state, that of China under the Qing dynasty (1644-1911). It employs hydraulic engineering as a lens through which to view the interactions between the state and society surrounding a crucial and widely recognized public good. In particular, it examines changing state approaches to financing the construction, maintenance, and repair of water control projects from the end of the eighteenth century to the mid-nineteenth, a pivotal period in which the “high Qing” ended and a weaker state confronted increasing challenges domestically and internationally.

The term “Qing state” as used here refers mainly to the territory and governance of “China proper.” This roughly covers the “eighteen provinces” that had been ruled by the Ming dynasty (1368-1644) but excludes frontier areas which had alternate forms of governance. The Qing state so defined was characterized by a unitary judicial and administrative conformity imposed by a centrally-coordinated network of political power. Officials were recruited for the most part through an examination system and rotated regularly through bureaucratic positions; administration was hierarchical and bureaucratic, proceeding from the lowest level of the county up through the prefecture and province to Beijing, where resided not only the emperor but also the major supervisory organs of central governance, the Grand Secretariat, the Six Boards and the Grand Council (junjichu).

During the eighteenth and the first half of the nineteenth centuries, the Qing government’s central coordination of political power in provinces was carried out through a highly institutionalized administrative apparatus consisting in practice mainly of the Six Boards and the Grand Council. The former were high-level ministries named for the functions they oversaw (Personnel, Revenue, Rites, War, Punishments, and Works); the latter was a kind of
privy council, military in its origins but gradually taking on great advisory and policy-making powers over the course of the dynasty. Provincial governors and provincial treasurers submitted routine reports (tiben, or ordinary memorials) to the Six Boards, but also had the right to directly communicate with the emperor and the Grand Council through “secret” or “palace” memorials (zouzhe).7

However, policy debates based upon the palace memorial system were not secret. When provincial governors were asked by the center to comment on policy suggestions presented in one particular memorial, they all had a chance to read the copied memorial before they responded as to whether the proposal would or would not work under the specific circumstances in each province. After receiving their answers, the emperor always asked Ministers of the relevant Boards and the members of the Grand Council to deliberate collectively. Major policies were usually adopted after such reasoned debates among provincial governors or governor-generals and representatives of the central government rather than being dictated by the personal will of the emperor.8 This is particularly the case in the making of policies related to water control where the public interest (gong) was often in conflict with the specific interests of social actors (si).

Construction and maintenance of dikes, polders, and irrigation ditches were crucially important to agricultural production which was the most important tax base for the Qing state. Moreover, maintenance of the navigation facilities of major rivers was vital to the development of inter-regional trade, which had thrived in China since the late sixteenth

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8 For examples of the making of fiscal and financial policies in Qing China, see Wenkai He, Paths toward the Modern Fiscal State: England, Japan, and China (Cambridge, Mass.: Harvard University Press, 2013), chapter 4.
century and became one important source of non-agricultural taxes for the Qing state. The Qing state was deeply involved in various projects of river control, and river work was its biggest item of civilian state expenditure. Meanwhile, there was active participation of societal actors in both the financing and management of projects of water control in China since the Song dynasty (960–1279). Many Japanese historians have highlighted the crucial importance of autonomous management and financing to water control on the part of local gentry in localities, particularly in the economically developed Lower Yangzi delta. As the Qing state always encouraged social participation in hydraulic projects, the Wittfogelian model, which claims that the management of large-scale water control works provided both the motivation and the chance for the bureaucratic state to impose its governance upon Chinese society, is not convincing.

However, there are limits to the capacity of social actors for self-organization and self-management in water control projects. Considering the rivalry of interests inherent in using water, such as those between upstream and downstream areas and between people living along the opposite banks of major rivers, Pierre-Étienne Will highlights the importance of the Qing state as an “impartial” guardian of the public interest in arbitrating difficult conflicts. Peter Perdue points out that the collective action problem often prevented social actors from effectively organizing large-scale water control projects. Coercion supported by state power was therefore vital to overcome the problem of “free riders” unavoidable in such major projects.

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10 For a review of this society-centered Japanese scholarship, see Mark Elvin, “On water control and management during the Ming and Qing periods: a review article,” Ch’ing-shih wen-ti, No. 3 (1975): 82-103.
efforts. In fact, to supervise the annual maintenance and check the quality of repairs and construction of local projects of water control were major responsibilities for magistrates and sub-county officials.

The Qing state also safeguarded a public interest that went beyond local particularized concerns. In Hunan province, for example, Perdue has demonstrated that the Qing government well recognized the necessity of prohibiting private dike construction in the Dongting Lake area and private encroachment of lakeshore so as to prevent the occurrence of man-made calamities, even though it did not possess the necessary institutional ability to attain this goal in practice. Such a lack of sufficient capacity to fulfill the state’s role in safeguarding the public interest is also revealed in issues of how to prevent environmental degradation. Qing officials acknowledged that the overplanting and deforestation of mountainous regions by immigrants (pengmin) was responsible for frequent downstream inundations. However, the state had to weigh competing claims to well-being, such as the livelihood of the unemployed in a society experiencing steady population growth. The Qing government also took for granted that one of its top priorities had to be feeding some 800,000 people in its capital of Beijing. In consequence, in order to maintain the transportation facilities of the Grand Canal which shipped “tribute grain” (grain paid in kind

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15 As a result, the Qing state could not prevent the proliferation of private dikes built by social actors possessed of substantial resources, nor could it discipline local officials to enforce related state laws to defend the public interest against the calculation of private profit. See Perdue, *Exhausting the Earth*, chapter 7.

16 See the emphasis on the livelihoods of migrants in the comment of the Jiaqing emperor on a memorial in 1815 discussing the serious deforestation problem in Anhui, Jiangxi, and Fujian provinces. The memorial of Zhejiang governor Yan Jian, 23rd day of the 3rd lunar month of the 20th year of the Jiaqing reign (2 May 1815) 嘉庆二十年三月二十三日, Palace memorial archives, Jiaqing reign 宫中档嘉庆朝奏折 (Institute of Modern History, Academia Sinica).
as a form of tax) from southern provinces to Beijing, the irrigation needs of the adjacent areas were often sacrificed and many farming lands inundated so as to guarantee sufficient water levels for Canal navigation.\(^\text{17}\)

Despite its institutional inadequacies, the Qing state still played a significant role in protecting the public welfare by acting as an impartial arbitrator in settling disputes among regions that had conflicts of interests in utilizing water. The Qing government often intervened when dikes built along the lower reaches of a river caused inundation in its upper reaches, or stepped in to regulate the operation of major sluicegates so as to keep a balance between the demands of irrigation for farming communities and those of navigation for merchants along the same river.\(^\text{18}\) The Qing government also used its coercive power to enforce the legal rights of those who had invested in constructing ditches or canals for irrigation to sell water rights to communities or households which had not participated in the projects.\(^\text{19}\) The widespread recognition of the state as the guardian of the public interest often motivated people (including both common people and gentry) to petition local governments, or even the central government, to adjudicate their disputes. Without effective intervention from the Qing state, the parties to such disputes often had to resolve their conflicts by violent means.

\(^{17}\) Ma Junya, *Beixisheng de "jubu": Huaibeihui shengtai bianqian yanjiu* [The “part” sacrificed: Ecological change and Huaibei society] (Beijing: Beijing University Press, 2011).

\(^{18}\) Zhang Jianmin, *Ming-Qing Changjiang zhongxiayou nongcun shehui jingji yanjiu* [Agricultural society and economy along the Lower Yangzi during the Ming and Qing] (Beijing: Shangwu yinshuguan, 2010), pp. 102-107.

In this paper, I aim to examine the welfare function of the Qing state as expressed in financing the construction, maintenance, and repair of water control projects during the reigns of the Jiaqing (1796-1820) and Daoguang emperors (1821-1850). Before this period, there were two major methods in financing hydraulic projects. One was state direct investment, which also included loans that the Qing government made to financiers, the annual interest income of which was earmarked specifically for water control projects. When the central government needed extra revenues for major construction or repair of river works, it could also appeal to sales of nominal titles (juanna) and levies of “contributions” (baoxiao) upon the privileged merchants who were granted monopolies in selling salt and in doing business with Westerners.20 Before the mid-nineteenth century, money raised through this method was also considered a form of official funds and could be used at the discretion of the center.

The other method was for the affected communities to raise the necessary funds themselves to finance and maintain local hydraulic projects. These “people’s projects” were broadly divided into two types: those managed autonomously by local people without any official intervention (minban minxiu) and those supervised by local officials (guandu minxiu). Yet in both cases, the funds were raised from people living within the communities benefiting from the water control project. As for private dikes and polders, the typical form of financing which emerged in the late Ming and continued in the Qing was that of “landlords contributing money, tenants contributing labor”.

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20 Xu Daling, “Qingdai juanna zhidu” [The sale of official rank during the Qing], in Ming Qing shi lunji [Collected papers on Ming-Qing history] (Beijing: Beijing daxue chubanshe, 2000).
In the first half of the nineteenth century, the Qing state experienced serious fiscal difficulties, particularly after 1820 when the scarcity of silver caused prolonged domestic deflation. In this situation, the Qing state increasingly encouraged merchants and local residents to donate money for hydraulic projects, even for some which used to be disbursed by official funds. This “privatizing” of infrastructure financing is in line with the received picture of the steadily deteriorating fiscal capacities of the Qing state and its consequent growing withdrawal from involvement in public works during this period.

Concurrently, however, there was an increase in the lending of official funds interest-free to finance water control efforts which had originally been financed by local communities. This phenomenon, which suggests a growth of state fiscal involvement in smaller-scale infrastructure, has not been addressed in the literature on nineteenth-century state decline. I argue that the existence of a rationale based upon the public interest and commonly shared by both state and social actors was fundamental to the evolution of this financing method. Even more interestingly, the vast majority of such loans in the first half of the nineteenth century which had not been repaid on time were finally cancelled by the Qing state, a fact that many Chinese historians have neglected. State lending to local communities had become de facto state spending on hydraulic engineering.

II. State financing of people’s projects in localities

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22 For such examples in the Lower Yangzi delta, see Fan Jinmin, ed., *Jiangnan shehui jingji yanjiu: Ming Qing juan* [Society and economy in Jiangnan: the Ming and Qing] (Beijing: Zhongguo nongye chubanshe, 2006), pp. 956-957.
The support of hydraulic projects necessary for agricultural production, commercial transportation, and protection of people from flooding was an important means for the Qing state to legitimate its governance. State investment in hydraulic engineering projects served two related functions. On the one hand, official funds invested in construction and repair of major water control projects could, by preventing disasters, not only save lives but also significantly reduce the state’s burden in providing relief to flood (and consequent famine) victims. Where floods still occurred, repair and reconstruction provided an opportunity for the unemployed in the calamity-stricken areas to earn wages. On the other hand, Qing officials at both the central and provincial levels paid particular attention to water control in order to consolidate the tax base of the state. Before the 1860s, land taxes constituted the major part of annual government income. Nonetheless, the Qing state’s actual ability to invest in water control was constrained by its fiscal system.

The fiscal institution of the Qing state became politically highly centralized after the fiscal reforms of the Yongzheng emperor (r. 1723-1735). The Board of Revenue supervised and audited the annual accounts of both the collections and expenditures of provincial governments.25 Although the center retained a large proportion of its income in treasuries at the provincial or even prefectural levels in strategic locations, the spending of these funds was at the discretion of the center, and local officials were not permitted to disburse these funds without central sanction.26 In order to run this decentralized fiscal system properly, the Board of Revenue set fixed quotas for both tax collection and official spending in each

province. For any expenditure over five hundred tael of silver, provincial officials had to receive central approval in advance.\(^{27}\)

This rigid quota-based fiscal institution did not possess the ability to easily increase revenue to meet changing spending needs. As a result, the Qing state tried to draw a clear division of labor between the state and society in financing and managing hydraulic projects. The central government was only to invest in big projects such as the Yellow River conservancy, which was funded and managed by the state, and the major dikes and dams necessary to keep the Grand Canal navigable. River works in Zhili province, such as those on the Ziya and Yongding Rivers, often benefited from official funds due to their proximity to the capital. The Kangxi (r. 1662-1722) and Qianlong (r. 1736-1795) emperors even got directly involved with the technical details of these projects.\(^{28}\)

Certain strategic or long river dikes, such as those in Hubei province which protected thousands of paddy fields and the provincial capital, were also funded by official money. However, the Qing government did not allocate regular spending to cover the entire cost of these projects. Instead, the government often relied upon the interest income derived from lending to pawnshops either regular official funds or the contribution money received from merchants to dispense the annual maintenance fee of these projects.\(^{29}\) The maintenance and repair fees of the sea wall (haitang) projects in Zhejiang province which protected farmland from sea water were funded by both state direct investment in major construction and the

\(^{27}\) Iwai Shigeki, “Shindai kokka zaisei ni okeru chūō to chihō” [The center-local relationship in the fiscal system of the Qing dynasty], Tōyōshi kenkyū XLII, no. 2 (September 1983), 338–340.


interest income derived from official funds lent to private financers for routine maintenance.\textsuperscript{30}

For the numerous smaller dikes and irrigation projects scattered across the country—often called “people’s projects” in contrast to those for which the state was officially responsible—the Qing government encouraged local communities to finance and manage both their routine maintenance and major repairs on the basis that their inhabitants would benefit.\textsuperscript{31} Under special circumstances, however, the Qing state would sometimes sponsor people’s hydraulic projects. For example, in the mid to late seventeenth century when the society had not yet recovered from the upheavals of the Ming-Qing transition, the government often funded the construction or reconstruction of water control projects for which local communities were unable to raise the necessary money.\textsuperscript{32} The state was more willing to shoulder the cost of people’s hydraulic projects when its treasuries were full. For example, the greatly expanded domestic economy in the eighteenth century provided the state with a growing tax base. In spite of the fixed quotas in tax collection and expensive military campaigns in Central Asia, Tibet, and Burma, the amount of silver deposited in the Board of Revenue was as high as 80 million taels of silver by 1795.\textsuperscript{33} In this situation, the Qianlong emperor generously used official funds to sponsor people’s hydraulic projects so as to reduce the financial burden on local communities.\textsuperscript{34}


\textsuperscript{34} Liu Wenyuan, Qingdai shuili jixiang yanjiu [Water control and account debits in the Qing dynasty] (Xiamen: Xiamen daxue chubanshe, 2011), pp. 30-35.
Despite these exceptions, the Qing state had no intention to increase its share in the investment of people’s projects of water control. On the one hand, both the emperor and officials insisted that there was an upper limit for the state to collect annual taxation (guojia jingfei youchang). Therefore, there was no reason for the people to expect the state to cover all engineering costs in their communities. On the other hand, the Qing government considered that the method of self-financing and self-management of local hydraulic projects provided fewer chances of abuse to county officials and functionaries such as runners and clerks. Moreover, government officials held it “natural” for people to invest in hydraulic projects that mainly benefited themselves. In urban areas, projects which supplied water for city residents or maintained river navigation for commercial purposes were often funded by donations from rich merchants or officials.35

The division of labor between the state and local society in financing hydraulic projects, however, put magistrates in rural areas in a very awkward position. Magistrates were held accountable by the center accountable for any suffering caused by the mismanagement of water control projects. Yet at the same time they were constrained by a rigid fiscal system which did not place adequate funds at their disposal to meet varying needs of the region under their jurisdiction. In response, magistrates often turned to “informal funding.” They used stored money to cover deficits without first obtaining sanction from the superiors.36 This method, however, could be exposed in the regular post-transfer audits conducted by the succeeding magistrate, in which case the official involved would face disciplinary measures even though he had not pocketed the funds but had instead used them for public purposes.

35 For typical cases of financing river works in cities such as Hangzhou and Nanjing, see Morita Akira, Shindai no suiri to chiiki shakai [River work and local society in Qing China] (Fukuoka-shi: Chūgoku Shoten, 2002), chapters 2 and 3.
36 The other two major means of “informal financing” in provinces were to remove money from funds allocated by the center or to collect surcharges from the local population. See Zelin, The Magistrate’s Tael, 47.
One example illustrates the dilemma and its consequences. When Zhao Zeng became the magistrate of Juye county in Shandong province in 1803, the Yellow River broke through its bank at the site of the Heng works (Henggong). In order to block the floods and strengthen the dike to protect the county seat, Zhao disbursed an official fund of 9,080 tael of silver, which was not included in the regular expenditure of the county. In 1807, Zhao was impeached by the Shandong governor and ordered to return this amount of money to the government within three years. When he failed to do so, Zhao was relieved of his post and sentenced to exile. In 1811, as there was no evidence that Zhao had embezzled the money, he was pardoned from exile. Nonetheless, the money had to be returned by Zhao’s superiors, who were responsible for supervising Zhao during his tenure as magistrate.37

As the quota-based official budgets in provinces could not accommodate necessary exigent spending for public welfare, another financing method emerged in contravention of the formal separation of financing and management responsibilities between the state and local communities in water control. This was “lending rather than spending” government money to construct or repair private water control infrastructure. This approach seemed to kill two birds with one stone: emergency measures to repair or rebuild people hydraulic projects were covered first by official funds, and then the regions that benefited from such works returned the money to the government by paying extra land taxes over a period of time. This method of financing local water control projects therefore seemed not to increase the state’s regular expenditure.

37 The memorial of Shandong governor He Shunwu, 8th day of the 7th lunar month of the 23rd year of the Jiaqing reign (9 August 1818). Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 4, No. 648-650.
There were several practical reasons pushing the Qing government to provide financial aid to local communities. First, the cost to repair a dike after a major breaching or to dredge a river after years of silting up was often too large for the local community to prepare in a timely fashion. This was particularly the case when the local community had just suffered from dike failure or inundation of farmland. Second, destruction which occurred before the need for major dredging or repair was recognized sometimes forced local residents to move far away. The Qing state thus had to disburse the project fees first in order to attract residents back home when the finished project had made farming possible.\textsuperscript{38} Third, when a hydraulic project was located between counties belonging to different provinces, it was often quite difficult for local communities to coordinate maintenance and repairs. For example, Huangmei county in Hubei province often suffered from breaching of the Chugong Dike because the people in Dehua county in neighboring Jiangxi province could not afford to maintain this dike properly. In response, the Hubei provincial government in 1838 petitioned the court to allow it to disburse an official fund of 8,481 taels to construct a new dike with a length of 1,589 zhang to run across the three provinces of Hubei, Jiangxi, and Anhui. Only when this state-funded project was finished could officials persuade local people to take responsibility for maintaining the parts of the dike located in their own communities.\textsuperscript{39}

Given these circumstances, by the late Qianlong era the method of “borrowing official funds to construct and returning later by extra taxes” had become quite important for the repair and strengthening of private water control projects. Provincial governments took the required money from the collected land taxes or other items of public funds and then lent it interest-

\textsuperscript{38} For such an example, see the memorial of Huguang governor-general Naerjinge and Hubei governor Yin Jiyuan, 8\textsuperscript{th} day of the 1\textsuperscript{st} month of the 15\textsuperscript{th} year of the Daoguang reign [5 February 1835].\textsuperscript{39} The memorial of Huguang governor-general Lin Zexu and Hubei governor Zhou Zhiqi, 22\textsuperscript{nd} day of the 2\textsuperscript{nd} month of the 18\textsuperscript{th} year of the Daoguang reign [17 March 1838].
free to the local community to undertake the work. When the project was finished, the communities that benefited from the finished project returned the money by paying extra rates in its annual land taxes. The time granted to clear this debt to the government ranged from two to twelve years.

Ecological changes sometimes forced the state to pay for the repair of private dikes which used to be funded by local people. For example, there was a road-dike (*ludi*) thirty *li* long outside the Bao’an gate of Wuchang in Hubei province. It was close to the major dike of Jiaomaiwang. The repair of this road-dike had long been funded and managed by residents nearby. However, as the Han river increasingly flowed east toward the Jiaomaiwang dike, the road-dike began to bear the brunt of the strikes of the river. By 1800, the accumulated damage to the dike became so serious that local residents simply could not afford the necessary repair fees. The Hubei provincial government dispersed 16,638 tael of silver out of the official fund designated for repairing the Jiaomaiwang dike to conduct a major repair of this road-dike to help strengthen the former.40

A similar case happened in Henan province. People in Wuzhi county had constructed a long-standing private dike to protect them from the Long river. However, as the Yellow River gradually moved north, it almost converged with the Long river. The private dike thus became less able to handle floods. In 1800, the Henan governor Wu Xiongguang asked to disburse official funds to strengthen this private dike, the Lanhuangnian (the dike to block the Yellow [water]). In 1804, the cost of repairs ran as high as 22,320 tael of silver, which was

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40 The memorial of Huguang governor-general Wu Xiongguang and Hubei governor Quan Bao, 21st day of the 1st lunar month of the 9th year of the Jiaqing reign [2 March 1804]. Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 1, No. 2048-2050.
expected to be returned by charging extra rates on local land taxes.\textsuperscript{41} Repairs of this dike in 1807 cost a further 13,328 tael of silver.\textsuperscript{42} This second official investment was also to be returned by extra land taxes on farmers protected by the dike. However, annual repair works steadily increased the length of the dike from 139 $zhang$ in 1816 to 1,380 $zhang$ in 1825, and the annual repair fees also rose from 30,000 to above 100,000 tael. In 1816, this dike came under official management. However, the number of villages being protected by the dike was only between twenty and thirty, and their total quota of annual land taxes was only three thousand, which was quite insufficient to repay the official repair fund. In 1825, the governor-general of the Grand Canal Zhang Jin and the Henan governor Cheng Zuluo proposed to give up this dike completely.\textsuperscript{43}

Wuzhi county was not the only place to have difficulty paying back official monies spent on hydraulic projects. Official funds were often not repaid by local communities on time. In particular, the extra land taxes remained a heavy burden on residents in those regions which had poor harvests even after the successful completion of water control efforts, or in regions located in positions vulnerable to hydraulic damage. In such cases, the funds borrowed from government accumulated over time. In order to reduce the resulting tax burden on local residents, governors sometimes tried to justify the use of official funds which did not have to be paid back. Alternately, they might emphasize the contribution or utility of repairing or strengthening local private projects to major state infrastructure responsibilities such as the Yellow River Conservancy or the Grand Canal navigation. By doing so, they could

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\textsuperscript{41} The memorial of Henan governor Ma Huiyu, 21\textsuperscript{st} day of the 1\textsuperscript{st} lunar month of the 9\textsuperscript{th} year of the Jiaqing reign [2 March 1804]. Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 1, No. 2139-2140.
\textsuperscript{42} The memorial of Hunan governor Ma Huiyu, 17\textsuperscript{th} day of the 6\textsuperscript{th} lunar month of the 12\textsuperscript{th} year of the Jiqaing reign [21 July 1807], Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 2, No. 517-519.
\textsuperscript{43} Wuzhi xianzhi (er) [Wuzhi County gazetteer (2)], Daoguang 9 [1829] edition, 道光九年刊本, pp. 624-633, Zhongguo fangzhi congshu 中国方志丛书
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legitimately use the funds assigned for the latter to cover the cost of minor private projects. Where any of these approaches was possible, local communities were freed from paying extra land duties.

The city of Suzhou (宿州) in Anhui province provides an instance of this diversion of official funds to spare taxpayers. Parts of the river dike that protected the city collapsed in 1808 due to erosion. Local gentry and commoners petitioned to borrow the estimated cost of 32,800 tael in silver from the government to pay for repairs; they promised to return the funds by paying extra taxes. Eyunbu, the acting governor of Anhui province, noticed that Suzhou prefecture had already borrowed official funds of some 30,000 tael of silver for a canal project to divert the river. In his opinion, the tax burden consequent upon two such projects would be too heavy. Eyunbu found that the center had approved the Anhui provincial government’s retention of the interest earned by lending the people’s contribution to granaries to merchants. This fund had been used to repair the city of Anqing the previous year, and there were still 40,000 tael of silver left. Eyunbu thus used the remaining funds to cover the cost of repairing the bank of Suzhou city.44

Infrastructural reconstruction might also be conceptualized as a means of disaster relief (yigong daizhen). For example, heavy rainfall in the autumn of 1810 caused many breaches of the Thousand Mile Dike in Zhili province, leaving it in urgent need of repair. The management and maintenance of this dike were the responsibilities of the people living along it but, stricken by floods, they could not afford the cost of fixing it. However, the Board of Revenue was reluctant to spend government funds on this private dike, despite its location

44 The memorial of acting governor of Anhui Eyunbu, 19th day of the 4th lunar month of the 13th year of the Jiaqing reign [14 May 1808]. Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 2, No. 1248-1251.
not too distant from the capital. As a result, the governor-general of Zhili Wen Huicheng decided to disburse 13,808 tael of silver from the relief fund to conduct repairs; local people were not required to repay this amount.\(^{45}\)

Several instances demonstrate how officials rationalized state support for private hydraulics as part of a larger conservancy effort. The headwaters of the Jiusheng river in Funing county were located close to the south bank of the Yellow River. This river was not only important to irrigate farmlands but also for the outflow of excess water which threatened the south bank. Moreover, it facilitated the transportation of materials needed by various bureaus in charge of managing the Grand Canal. In 1812, the cost of dredging the silted-up river ran as high as 33,915 tael of silver. Yet this area had suffered from floods continually since 1804, and the people could hardly bear the extra burden of returning the borrowed government funds. The governor-general of Liangjiang Bailin and the Jiangsu governor Zhu Li memorialized for permission to use the funds deposited in the bureaus of the Grand Canal to undertake the desperately needed drainage; they justified their request by emphasizing the importance of dredging this river to the management of the Grand Canal.\(^{46}\) Likewise, the cost of 29,300 tael of silver for urgent repairs to the bank to protect the Dangshan county seat from heavy flooding by the Yellow River in 1811 was originally to be returned by extra taxes levied upon local people. However, Bailin reported that in addition to flood damage, this county had suffered drought in 1813 and 1814, and the land taxes due in 1814 and 1815 in this area had been postponed. Given this situation, local people were unlikely to be able to repay the repair costs. As a result, it was disbursed from the annual expenditure the Qing government

\(^{45}\) The memorial of governor-general of Zhili Wen Chenghui, 19\(^{th}\) day of the 4\(^{th}\) month of the 16\(^{th}\) year of the Jiaqing reign [9 June 1811] Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 3, No. 442-444.

\(^{46}\) The memorial of Liangjiang governor-general Bailin and Jiangsu governor Zhu Li, 29\(^{th}\) day of the 7\(^{th}\) lunar month of the 17\(^{th}\) year of the Jiaqing reign [4 September 1812] Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 3, No. 1558-1560.
assigned to the bureau of the Grand Canal. Concern for the public interest—particularly a
desire to reduce the tax burden on local residents—was one major reason why Qing officials
actively sought excuses to use state funds to cover some of the costs of “people’s projects”.

As mentioned above, the Qing government often relied upon the interest earned from lending
official funds to merchants to finance officially managed dikes or banks. There is evidence to
show that this financing method was also extended to “people’s projects”. For example, the
Yu River in the counties of Huazhou and Huayin in Shaanxi province channeled water from
the mountains into the Wei River. Its dike was managed by local people. However, its
construction was not solid due to the limited investment from local people, and floods often
inundated the bank between summer and autumn. Provincial governors and circuit officials
investigated this situation and suggested financing the repair and maintenance with
government money so as to protect the agricultural land. Yet the two counties were quite poor.
The Shaanxi governor Lu Kun and provincial treasurer Chang Wen decided to remove
120,000 tael of silver from the fund deposited in the treasury which was assigned for the
purpose of repairing the Yue Temple. They lent the money to pawnshops and used the annual
interest of 12,000 tael to finance maintenance of this private bank.48

Although it is clear that Qing officials often manipulated the fiscal system to cover the costs
of private water control and reduce the tax burden on localities, the degree of flexibility was
limited. For instance, only governors and governor-general had the privilege to propose

47 The memorial of Liangjiang governor-general Bailin and the acting governor-general of Grand Canal Li
Shixu, 11th day of the 10th lunar month of the 19th year of the Jiaqing reign [22 November 1814] 嘉庆十九年十
月十一日, Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 4, No. 106-
108.
48 The memorial of Shaanxi governor Lu Kun, 5th day of the 12th lunar month of the 3rd year of the Daoguang
reign [20 June 1823] 道光三年十二月初五日, Grand Council memorial file copies-Daoguang-Water control 军
机处录副-道光-水利, Box 1, No. 229-231.
covering such costs with official funds designated or assigned for large-scale water control works. The majority of state lending for private hydraulic projects still needed to be repaid through extra land taxes. Thus communities which could raise the money autonomously to construct or repair local hydraulic projects did not ask for financial aid from the government. For example, of the dikes that were breached by floods in Hunan province’s Huarong county in 1831, half were repaired by the inhabitants themselves while the rest had to borrow money from the government.\(^{49}\)

In the first half of the nineteenth century, the method of lending official funds for private projects of water control had become institutionalized in practice. If the estimated amount of the loan was not reported to the Board of Revenue in advance, the officials involved were not only subject to disciplinary measures but were also responsible for returning the money to the treasury when local communities could not clear the debt on time. This occurred in the case of the Jiaomaiwang dike described above. All the officials implicated in this loan, ranging from the magistrate of Jiangxia county to the former governor-general of Huguang, had to pay half of the expenditures out of their own pockets.\(^{50}\)

Despite this danger, the need for money to meet emergency demands for water control meant that officials might still decide to lend official funds without first obtaining permission. Doing so made responsible officials an easy target to be sued. Let us look at a case from Shaanxi province. As the Yellow River, which ran through Chaoyi county, moved westward, it seriously threatened the inhabitants of the area near Zhaoduzheng. Members of the local

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\(^{49}\) The memorial of Hunan governor Naerjinge, 27\(^{\text{th}}\) day of the 6\(^{\text{th}}\) lunar month of the 17\(^{\text{th}}\) year of the Daoguang reign [29 July 1837]. Grand Council memorial file copies-Daoguang-Water control 军机处录副-道光-水利, Box 2, No. 1788-1789.

\(^{50}\) The memorial of Huguang governor-general Wu Xiongguang and Hubei governor Quan Bao, 21\(^{\text{st}}\) day of the 1\(^{\text{st}}\) lunar month of the 9\(^{\text{th}}\) year of the Jiaqing reign [2 March 1804]. Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 1, No. 2048-2050.
gentry planned to raise money to dig a canal (yinhe) to channel water back to the previous riverbed. Due to the urgency of the project, the provincial treasurer agreed to lend 41,000 tael of silver so that the local people could initiate the project in the summer of 1839. The work did not proceed smoothly and had to be cancelled two years later. As for the 30,000 taels of silver that had been spent, the Shaanxi provincial government decided to clear it in 5 years by applying the annual interest income derived from lending 60,000 taels of silver out of the idle items in the provincial treasury to merchants. In 1841, however, a candidate official who was punished for misbehavior exposed this arrangement to the center when he sued his superiors. No embezzlement was found when investigators from the center checked the bookkeeping and consulted the local gentry. However, as this loan had not been reported to the Board of Revenue in advance, the Shaanxi governor Funiyanga was disciplined. As the lending of official funds for people’s projects of water control was not due to the goodwill of officials as individuals but resulted from an institutionalized procedure, it was by nature different from officials’ personal donation of their own money for local projects, in which case the gratitude of local people might go to the officials rather than to the state.  

When communities did borrow official funds, the cost was first estimated by county officials in cooperation with local gentry. The amount was then reviewed by circuit officials who visited the project location; after this, it was approved by the provincial authorities. The money was directly handed over to members of the local gentry who were supposed to organize the work and even cover the deficit if the official funds turned out to be inadequate. In this way, runners and clerks in the county government would have little chance to

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51 In the Daoguang reign, increasing fiscal difficulties due to the high value of silver in regard to copper coins forced the Qing government to encourage officials and merchants to donate money for water control projects. In Yongnian county in Zhili province, the magistrate Bian Qingcai in 1837 donated 10,597 taels of silver to repair the dike that protected the county seat. This is one of the largest donations for water control by a magistrate that I have found. The memorial of Qishan, 25th day of the 7th lunar month of the 17th year of the Daoguang reign [25 August 1837] 道光十七年七月二十五日. Grand Council memorial file copies-Daoguang-Water control 军机处录副-道光-水利, Box 2, No. 1816-1817.
embezzle the funds. When the Hunan provincial government in 1813 lent 9,740 taels of silver for the people in the counties of Wuling and Longyang to repair their damaged enclosure dikes, the acting governor Chen Yu emphasized that the money had to be delivered directly to the inhabitants of the area of each breached dike without going through the hands of local government functionaries.\(^{52}\) Similarly, the official funds that were regularly lent to support drainage of the Liu River in Jiangsu province were also handed over directly to the local gentry.\(^{53}\) Although the government often sent officials to check the finished works, officials expected local people to have a strong motivation to ensure the quality of these projects with which their interests and livelihood were closely connected. Such disbursements of official funds for private hydraulic projects were freed from the time-consuming and rigid auditing procedure (baoxiao) of the Board of Revenue or the Board of Works.

The government did not incur any extra expense as long as the lent-out money was paid back within the designated period by extra land taxes. However, the effects of this financing method in practice were quite different from the original design. Although the communities in the wealthy Lower Yangzi delta could afford to pay extra duties to return the official funds borrowed from provincial governments for local hydraulic projects, many communities could not do so punctually. In poor provinces such as Yunnan and Guizhou, the government either directly invested in local projects or exempted the local communities from repayment. For example, Dian Lake (Dianchi) near Kunming, the capital of Yunnan province, was important for irrigating farmland in the four counties of Kunming, Jinning, Kunyang, and Chenggong. Both the regular and extraordinary drainage of the mouth of Dian Lake to allow excess water

\(^{52}\) The memorial of the acting Hunan governor Chen Yu, 10\(^{th}\) day of the 11\(^{th}\) lunar month of the 18\(^{th}\) year of the Jiaqing reign [2 December 1813]. Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 3, No. 2490-2493.

\(^{53}\) The memorial of Sulinga and Fei Chun, 20\(^{th}\) day of the 10\(^{th}\) lunar month of the 1\(^{st}\) year of the Jiaqing reign [19 November 1796]. Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 1, No. 182-184.
to flow out was paid for by official funds. Costs ranged from one thousand to seven thousand tael of silver each time. Local inhabitants did not need to pay the government back for these expenditures.54

Likewise, in the spring of 1831 Tongzi county in Guizhou province suffered from a severe flood, and the existing river bed was too narrow to divert the excess water. The Guizhou provincial government thus decided to dig a long ditch to allow the water to flow out. Of the total amount of some 22,800 tael of silver, officials in Guizhou contributed 12,700 tael while members of the local gentry contributed 1,100 tael; the remaining 9,000 tael was borrowed from the provincial treasury. Officials in Guizhou further took over four thousand tael of this loan as their responsibility, while the final five thousand was expected to be paid back within ten years from extra taxes on farmers in Tongzi county. However, the Guizhou governor Yutai in 1835 memorialized to the court that the mountainous Tongzi county was quite poor and the annual quota of land taxes was only two thousand tael of silver. The annual five hundred tael of extra taxation was thus a tremendous burden on local farmers. Yutai petitioned to deduct this item of five thousand tael of silver from the official funds [yanglianyin] held by the Guizhou government.55

Such arrears were widespread in the first half of the nineteenth century and even earlier. For example, the government in 1788 lent some 48,700 taels of silver to repair private dikes and ditches in the counties of Henei and Wuzhi in Henan province. This amount needed to be returned within two years by collecting extra land taxes from the twenty-five counties that

54 The memorial of the governor-general of Yunnan and Guizhou Bolin and Yunnan governor Yongbao, 28th day of the 10th lunar month of the 13th year of the Jiaqing reign [15 December 1808], Grand Council memorial file copies-Jiaqing-Water control 军机处录副嘉庆-水利, Box 2, No. 1741-1742.
55 The memorial of Guizhou governor Yutai, 25th day of the 2nd lunar month of the 15th year of the Daoguang reign [23 March 1835], Grand Council memorial file copies-Daoguang-Water control 军机处录副道光-水利, Box 2, No. 314-318.
benefited from the projects. However, 19,190 tael was still outstanding six years after the deadline.\textsuperscript{56}

Arrears even happened in relatively rich regions. In 1833, big floods destroyed the circling dikes (\textit{yuandiji}) between Nanhai and Shunde counties in Guangdong province. The local gentry petitioned to borrow 49,000 tael of silver from official funds to repair the dikes. After applying the annual interest income derived from one item of money that the local gentry had deposited for the yearly maintenance of the dikes against this debt to the government, 10,600 taels remained. This amount was to be repaid within 5 years (starting from 1834) by an extra duty added to the regular land taxes. However, as late as 1842, the Guangdong government had not received any repayment because local households could not reach a consensus on how to distribute the extra burden among themselves.\textsuperscript{57}

Such delays in returning borrowed official funds seem to have been the rule rather than the exception. In 1803, the governor-general of Huguang Wu Xiongguang and Hubei governor Quanbao pointed out to the court that the extra land taxes that should have been collected to return funds lent for private hydraulic projects were often in arrears in the provinces; arrears of more than twenty years were not unknown. The major reason, in their opinion, was that the performance of magistrates was evaluated by the collection of the formal quota of land taxes rather than the extra rates. There were either light or even no disciplinary measures against magistrates if they failed to collect the extra land taxes on time. They thus suggested that the

\textsuperscript{56} The memorial of Li Fenghan, 29\textsuperscript{th} day of the 8\textsuperscript{th} lunar month of the 1\textsuperscript{st} year of the Jiaqing reign [29 September 1796]. Grand Council memorial file copies-Jiaqing-Water control 军机处录副-嘉庆-水利, Box 1, No. 141.

\textsuperscript{57} The memorial of governor-general of Liangguang Qi Gong and the Guangdong governor Liang Baochang, 13\textsuperscript{th} day of the 11\textsuperscript{th} lunar month of the 22\textsuperscript{nd} year of the Daoguang reign [14 December 1842]. Palace memorial archives, Daoguang reign memorials 宫中档道光朝奏折 (Institute of Modern History, Academia Sinica).
court include the collection of extra land taxes into the regular evaluation of the administrative performance of magistrates so that state advances for private local infrastructure projects would be returned.  

That this suggested measure was not enforced in practice is indicated by the accumulation of such arrears at the end of the reign of the Daoguang emperor. For instance, in 1846, the Jiangxi governor Wu Wenrong reported to the court that the total amount still owed to the government ran as high as 251,800 tael of silver and dated back to 1823. As similar arrears in Jiangsu and Anhui provinces had been exempted by the court in 1795, 1818, and 1835 respectively, Wu Wenrong asked the court to write off all the Jiangxi arrears accumulated by 1840.  

In Hubei province, a total of 327,218 tael of silver in official funds lent for private water control projects before 1830 was still outstanding and was finally exempted in 1837.  

In Anhui province, the total amount of state funds that local communities had borrowed for water control projects in 1832, 1835, 1837, and 1839 was 274,654 taels of silver. As of 1847, 191,353 tael of silver (equivalent to 70 percent of the total debt) had not been paid back yet, and the Qing state exempted these liabilities.  

In 1848, the governor-general of Minzhe Liu Yunchun petitioned the court to exempt the amount of 21,196 tael of silver that the counties of Longxi and Nanjing had borrowed from

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58 The memorial of the governor-general of Huguang Wu Xiongguang and Hubei governor Quanbao, 23rd day of the 11th lunar month of the 8th year of the Jiaqing reign [5 January 1804]. Grand Council memorial file copies-Jiaqing-Water control 力机处录副-嘉庆-水利, Box 1, No. 1908-1912.  
59 The memorial of Jiangxi governor Wu Wenrong, 13th day of the 10th lunar month of the 26th year of the Daoguang reign [1 December 1846]. Grand Council memorial file copies-Daoguang-Water control 力机处录副-道光-水利, Box 3, No. 2581-2582.  
60 The memorial of governor-general of Huguang and Hubei governor, 16th day of the 5th lunar month of the 17th year of the Daoguang reign [18 June 1837]. Palace archives, Daoguang reign memorials 宫中档道光朝奏折 (Institute of Modern History, Academia Sinica).  
the government in 1827 to repair local dikes and banks. Liu pointed out that the official land
taxes had often been arrears in these two poor counties, let alone the extra rates for repaying
official advances. In Hubei province, the total amount of similar arrears in counties by 1846
was 601,822 tael of silver. The Hubei provincial government petitioned the court to exempt
this debt as the people in Hubei simply could not afford to pay it back. Although the
specific amounts of arrears in other provinces remains to be examined, it is not unreasonable
to expect them to be on a similar scale as those observed in Hubei and Jiangxi provinces. The
state funds which were lent to sponsor private hydraulic projects across the country between
the 1790s and 1850s thus constituted a major item of the Qing state’s *de facto* spending.

This “lending” of state funds for local hydraulic projects constituted a special means for the
Qing state to legitimate itself even when it was experiencing fiscal difficulties in the first half
of the nineteenth century. This method also made the quota-based Qing fiscal system more
responsive to varying spending needs when the annual tax income was substantially fixed.
After the repression of the Taiping Rebellion in the mid-1860s, the fiscal institution changed
fundamentally as the Qing state began to tap more revenue from commercial sectors by
levying indirect duties on consumption (*lijin*). The center allowed provincial governments to
retain up to 20 percent of the collected *lijin* revenue for spending within the province, without
being audited by the Board of Revenue. Thus governors in the last few decades of the century
had more official funds to finance people’s projects of water control in their respective
jurisdictions. Under these circumstances, “loans” of state money to cover local water control
costs came to be relatively uncommon compared with the first half of the nineteenth century.

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62 The memorial of the Board of Revenue, 14th day of the 6th lunar month of the 28th year of the Daoguang reign
63 The memorial of the governor-general of Huguang Yu Tai and Hubei governor Zhao Bingyan, 14th day of the
V. Conclusion

The state is not just an instrument completely controlled by a class or certain groups to either advance their particularized interests or to repress other social actors as Marxian scholars have claimed. Nor does state autonomy imply that state actors could pursue their policy goals independent of the interests of social actors, as the strong version of state-centered theorists suggest. The normative concept of public interest upon which the state bases its coercive power is crucial to examine the interactions between the state and society. Where this basis is commonly accepted by both state and social actors, it provides a rightful platform from which to make legitimate appeals to the state. This encompasses not only demands by members of society on local or central powers, but also for officials themselves to make requests of the center and to adapt existing principles and practices of administration in new ways.

Institutional channels and opportunities to make such requests differ in authoritarian and democratic states. But as we have seen in the case of Qing water control, the space such a normative system provided even in a non-democratic state for negotiation and innovation was far from negligible. To disallow social actors the chance to make petitions or requests would ruin the legitimacy of the state.

It was upon this same basis that state actors not only permitted but encouraged social actors to shoulder more responsibility in local infrastructure, as well as in other efforts related to the general welfare such as charity organizations. Active participation by non-state actors in both financing and managing local projects of water control (or other sites related to the public interest) by no means suggests rejection of, or opposition to, state power and authority.
Indeed, social actors were ready to seek help from state actors when they found themselves unable to settle conflicts or come up with needed costs.

The state and local society in Qing China therefore should not be viewed as two opposing sides in hydraulic engineering. A shared conception of how the state should act to safeguard the public interest—and thus what kinds of requests subjects and officials could reasonably make—underlay and facilitated the changing relationship between the state and society in financing water control. Local communities by themselves could not automatically overcome many collective action problems in contributing the manpower and money necessary for water control, especially for larger cross-regional projects. The state was thus indispensable for organizing and coordinating the construction and maintenance of major hydraulic efforts.

The state’s financial support also proved vital for repairing local hydraulic projects when local communities were unable to raise the funds needed to repair severe damage in a timely fashion. This was even the case in the economically most developed areas, such as the Lower Yangzi delta and the Pearl River delta. When the affected communities returned the borrowed money to the government by paying extra rates on land taxes over a period of time, this special financing method became a form of state investment in small-scale infrastructure through increased tax revenue, albeit in reverse order. The state obligation to act as the guardian of the public interest provided the common ground on which both the petitions from provincial governments and the sanction of the center were based.