Incentives and Information: an Institutional Perspective on the Traditional Chinese State and Great Divergence in the Early Modern era

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This is research in progress serves as a background paper for my presentation at the Hayami Festschrift Workshop. My presentation slides in the workshop will discuss more the historical legacy of traditional Chinese state and link more closely with Prof. Hayami’s research on this topic.

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Abstract: This article provides a new interpretation of the evolution of Chinese state in the perspective of new institutional economics, with special application to Imperial Qing (1644-1911). It delineates the political logic of an absolutist empire in the framework of a principal-agent model with three major actors: the emperor, the bureaucracy and the people. It shows that while monopoly rule, long time-horizon and large size of empire could set China on a path of low-taxation, political stability and extensive growth, fundamental incentive misalignment and information asymmetry problem embedded in a centralized and hierarchical political structure significantly weakens fiscal and legal capacity to support institutions and institutional change conducive to modern economic growth.

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Abstract: This article provides a new interpretation of the evolution of Chinese state in the perspective of new institutional economics, with special application to Imperial Qing (1644-1911). It delineates the political logic of an absolutist empire in the framework of a principal-agent model with three major actors: the emperor, the bureaucracy and the people. It shows that while monopoly rule, long time-horizon and large size of empire could set China on a path of low-taxation, political stability and extensive growth, fundamental incentive misalignment and information asymmetry problem embedded in a centralized and hierarchical political structure significantly weakens fiscal and legal capacity to support institutions and institutional change conducive to modern economic growth.

Why did China, given her economic and technological leadership in the 14th century or even in the 18th century as some have recently claimed, fail to become the first industrial nation. A multitude of hypotheses proposed ranged from cultural and scientific traditions to factor endowments or natural resources. However, political and economic institutions that pertain to property rights and contract enforcements – factors viewed as fundamental to long-term economic growth by institutional economist – have figured little in this debate. Part of the reason that account for this scant attention was that the historiography on the role of traditional Chinese state and institutions had long been dominated and clouded by the overly simplistic theoretical framework of oriental despotism or theories of class struggle in the official Communist ideology. On the other hand, there had developed the opposing literature that emphasized the Imperial rule of benevolence which provided a framework that taxed lightly on the peasantry, protected private property rights and interfered little in the operation of a well-establishment markets in land and labor (reference here).

This paper reconciles these opposing views with a reinterpretation of the early modern Chinese state in the perspective of new institutional economics. It argues that while the traditional framework of oriental despotism may be overly pessimistic and misleading, the role of state – its absolutist features and highly centralized political and fiscal regime – figures prominently in the formation of property rights and contract enforcement in early modern China. In particular, the classic dilemma of government credible commitment as posed by Douglas North – while economic growth requires a strong state to secure property rights, but a state too strong becomes a potential threat to private property rights – is a perennial one throughout the two millennial of Chinese dynasties.

1 See Ma 2004 for a summary of these hypotheses.
2 See Wittfogel for the case of oriental despotism and Wang Yanan’s book cited in this paper as a strong condemnation of the traditional Chinese state from a Marxist perspective.
The Chinese imperial political structure, which evolved in relative isolation with remarkable continuity, offers a fascinating case study of the role of the state on economic growth in a long-term perspective. Drawing on the insights of several important recent studies related to institutions and economic growth as championed by Douglas North, Avner Greif, Acemouglou et al, this article delineates the political logic of Chinese empire in the framework of three major actors: the emperor, the bureaucracy and the people, each with their own objective functions and incentive schemes. In the framework of principal-agent and asymmetric information, it shows that the historical interplay of these three agents with their respective incentive schemes and structures of private information shape the internal logic of the political structure and the rationale of Confucian ideology.

I argue that in an absolutist regime, the absence of government credible commitment can be partially alleviated through rulers’ monopoly of power and long time-horizon, which could lead to a virtuous equilibrium of low-extraction and the operation of a relatively free private economy. Furthermore, the power and reaches of the Chinese empire could be constrained by double principal-agent problems among the three actors. Thus, the fundamental incentive misalignment and information asymmetry problem embedded in a centralized and hierarchical political structure serves to tie the grabbing hands of an absolutist state. But more importantly, with long time horizon of monopoly rule, rulers’ objective function switched from short-run revenue maximization to the long-term defence of monopoly rents. Fiscal extraction and tax revenue maximization became secondary to the survival and extension of rule, which hinged on the diffusion of internal revolution and elimination of alternative or contending sources of political power.

This article makes a comparison with Western Europe which was characterized by political fragmentation since the fall of the Rome Empire. It shows that the existence of some form of “voice” (representative bodies in some form or another) and “exit” (political fragmentation) in Western Europe led to a contrasting path of evolution in political and fiscal institutions from China. The European political system since the Medieval era approximates a market structure of oligopolistic or monopolistic competition where existing monopoly rents (due to rulers’ monopoly in the provision of internal peace and other public goods) were subject to contestable and competitive pressure. Inter-state competition, often through a Schumpeterian process of creative destruction, strengthened the fiscal and
administrative capacity of the winning states. A bottom-up institutional building and inter-state competition which helped overcome incentive and information problem and strengthen European state capacity to overtake the early Chinese advantage. Using reconstructed data on fiscal revenue, population and prices, this article provides a quantitative comparison of the contrasting development in fiscal and administrative capacities between Qing China (1644-1911) and 18-19th century Britain.

I divide the paper into four main sections. The first section provides a narrative model of the political structure. The second illustrate the historical context. The third section applies this model to Qing China (1644-1911) with quantitative evidences. The four sections examines the implications of this traditional Chinese political structure with a comparative perspective on English and Western European states in the early modern era and its relevance for explaining the Great Divergence.

I. The Model

From the founding of the Chinese empire in Qin (221 – 206 BC) up until the fall of the last Imperial Qing dynasty in 1911, a centralized rule with political power monopolized by a single Imperial dynasty supported by a civil bureaucracy had been indisputably her most distinguishing characteristics. We start with a description of the theoretical model or, to borrow a terminology from Max Weber - the ideal type - of the Chinese empire as an absolutist regime before we proceed to historical reality. In this model of absolutist regime, ultimate power was vested in the emperor who commanded property rights over all factors of production including land and labor. At the other or lower end of the spectrum are the people or masses (farmers or peasants in an agrarian regime) who are nominally the tenants and cultivators of land and resources owned by the emperor. The Imperial household is entitled to rents from agricultural output, the bulk of which went into the supply of external defence and internal security.

In this model, the dominance of a single imperial household over all social or political groups is essential. At the founding of the Qin empire, China’s First Emperor (秦始皇), followed the advice

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3 This is clearly expressed by the notion of ‘Wang-tu wang-min (王土王民, king’s land, king’s people/all land and all people are owned by the sovereign)’, which appeared in The Book of Songs compiled during the age of Warring States (403-221 B.C.) and persisted throughout the imperial period, see Kishimoto 2008, Terada 1995 and Deng 2006, chapter 1.
of his Legalist (法家) prime minister, Lishi (李斯) and opted against a feudal (封建) type of political arrangements where the imperial power would co-exist with various regional elites or aristocrats often with hereditary status. Instead, they implemented a regime of empire-wide administrative units (郡县制) and household registration (编戸齐民). In this new regime, only the status of imperial throne is hereditary. With the elimination of aristocracy or self-contained political units, the administration of the empire - tax collection and the coordination and provision of basic public goods – would be governed by direct imperial rules and orders (律令) executed by a professional and impersonal bureaucracy. The subsequent rise of a Chinese bureaucracy as the administrative organ of the emperor or the state became a distinctively Chinese institutional innovation.4

The logic of the tri-part political model can be illustrated by the words of the great Tang Confucius scholar, Han-Yu (韩愈): “A Ruler is there to give orders, an official is there to carry out the ruler’s order and people are there to provide offerings of grain, hemp, silk, china and money to the above. A ruler failing to give orders is not ruling properly, an official failing to execute orders is not acting properly and the people not making the offering should be punished” (cited in Liang, 2002, p. 72-3).

This concept of the state, as pointed out by China historian Qian Mu, is in many ways an extension of the Chinese concept of a patriarchal household. With the elimination of hereditary aristocracy, the transition from feudalism to central rule turned the stand-alone imperial household (家) into the national sovereign (国). The literal translation of the Chinese character for nation-state (国家) is really “state-family” or what Max Weber termed as a “familistic state” (Creel, p. 168). Etymology used by Qian Mu reveals what was the equivalent Chinese term of “prime minister” (宰相) for the empire derived from titles that denoted managers of private royal households in the pre-Qin period.

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Thus, for Qian Mu, the rise of central rule also marks the beginning of a separation between ownership (the Imperial ruler) and management (the bureaucracy)\textsuperscript{5}.

This political structure, to borrow present day industrial organization terminology, is not entirely dissimilar to large private (family) ownership but managed by outsiders. This analogy will turn out to be a useful guide to examine the economic efficiency of this political organization in light of the principal-agent theory. We thus have a political model with three actors: the emperor, the bureaucrat and the masses or peasant farmers. Each of these actors has its own distinctive objective functions, incentive schemes and information structures. With the emperor claiming a share of peasant farm output collected through the bureaucrats, incentive misalignment among or between the actors would potentially induce the emergence of double principal-agent problems: that between the emperor and the bureaucrat and that between the bureaucrat and agent.

To understand both the logic and to certain degree, the remarkable longevity of this model of political autocracy throughout Chinese history, it may be useful to start with Mancur Olson’s benchmark model based on the analogy of stationary and roving banditry. The crux of the argument is that monopoly political rule given long time horizon (especially with throne being hereditary across generations as in dynasties) could, contrary to what is often believed, lead to a “virtuous” equilibrium of relatively low level of predation or extraction and high level of provision of public goods by the rulers (Olson 1993). The key assumption is that ruler’s self-interest to maximize tax revenue provides incentives to support economic growth leading to a larger tax-base. The longer the time horizon and the more stable the rule is, the greater the ruler’s interest could align with the interest of the sovereign. Thus under conditions of monopoly rule, and long time horizon and low discount rate, rulers’ high valuation of the stream of future tax income over one-time or short term extraction constitutes a self-enforcing constraint on the grabbing hands of the autocratic rulers in the absence of formal constitutional constraint.

\textsuperscript{5} See Qian, 1966, pp.8-12. See Liang, chapter 1 and Creel for similar arguments on the clan and kingship origin of the Chinese state. The derivation of national sovereign from Chinese imperial household has often led to the contentious claim that Chinese emperors throughout history often continued to view the empire as his private domain. For a similar formulation of the traditional Korean state, which modelled itself careful after the Chinese model, see Kim ??. However, the private or family origin of national sovereign is also characteristic of many of the early European states, which are often labelled “patrimonial”, see Strayer on the case of early England and Spruyt for France.
Traditional Chinese autocracy is founded on a ruler-centered model, with no formal or external institutional constraint placed against the powers of the Imperial rulers and their agents on the general populace. There was a system of checks against bureaucratic abuses of power or dereliction of duty or to redress grievances of the general populace strictly within the administrative hierarchy in top-down fashion with the emperor often being the final arbiter. But there is no formal or external institutional constraint against the powers of the emperors except the vaguely defined principle of the imperial rule of legitimacy embedded in the mandate of heaven. The problem of the absence of formal constraints against emperor is succinctly summarized by Ray Huang’s study of Ming despotism: “…Final authority (was) rested in the sovereign, bureaucratic action was limited to remonstrance, resignation, attempted impeached of those who carried out the emperor’s orders, and exaggeration of portents as heaven-sent warnings to the wayward emperor. When all these failed, there was no recourse left.” (Ray Huang, 1974, p. 7).

Of course, rulers do fear the possibility of violent revolt and insurrection from masses due to abuses of imperial and bureaucratic power. The breaching of this insurrection constraint has been one of the defining features of Chinese history marked by dynastic changes and peasant rebellions. The well-know admonishment by the Tang emperor that water can float as well as overturn a boat just like masses could do to their rulers is vivid illustration of this ever-present if somewhat unpredictable constraint.

A key problem that Chinese imperial rulers confronted was how to contain the power of the bureaucracy. The asymmetric information problem in an expanding empire often led the throne to depend on an inner nucleus of staffs, often outside the ranks of formal bureaucracy, for key political decisions and monitoring. Over time, with these inner layers of staffs slowly absorbed into the formal bureaucratic structures, they were then replaced by new inner circles that would include royal eunuchs and bondservants. These evolving strategies led to the shifts of bureaucratic structures across Chinese dynasties and culminated in the elimination of the office of prime ministership since the early Ming (Wang Yanan, pp. 48-49, Qian Mu).

This Chinese model of autocracy differs quite significantly from Western Europe. There even the most absolutist and centralized rulers had to contend with some form of local power magnates
whether they be autonomous city states, landed aristocrats or some form of representative bodies, not to mention the Church. In this sense, rulers in Western Europe could be defined as a coalition or a class consisting of landed and commercial elites some of which into corporate bodies or representative assemblies. The stand-alone nature of Chinese rulers were consistent with numerous historical examples of the rulers turning against the landed or commercial elites as well as bureaucrats.\(^6\)

It was precisely this extremely narrow interest of the Chinese rulers that, as predicted by the Olsonian model, allowed the imperial rulers to transcend the factional interests of elites or bureaucrats and to represent, with the moral claim of the mandate of heaven, the much larger encompassing interest of the sovereign. Without having to contend with independent and autonomous powers, the Chinese imperial rulers stood beyond the interests of any ruling class and in fact, if strictly defined, only represented the interests of himself and his lineage.\(^7\) Given the relatively small and unchanging size of the Imperial household, the presence of asymmetric information in the bureaucratic structure and the possibility of insurrection, fiscal predation and revenue maximization were of secondary interest to the Imperial objective to survive and preserve its monopoly position. History has taught the useful lesson that blatant fiscal extraction or confiscation was usually precursor to revolts. With economies of scale in national defence and the provision of public goods, fiscal extraction if evenly spread out over the general population would be even lower if measured on a per capita basis. The co-existence of these conditions could lead to a virtuous equilibrium of low fiscal extraction and largely free and private market sector.

II. The History

As in West Europe and perhaps elsewhere, geopolitical competition and warfare formed the most immediate and powerful impetus to Chinese state formation during the Warring-State period (403-221 BC). Warfare favored those states which developed administrative capacities to mobilize and centralize its resources and factors of production. Reform measures carried out by Qin that crushed

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\(^6\) For Ming emperors’ brutal treatment of unruly bureaucrats, see Liang, p.85. Huang counted in detail the sorry fate of all the 89 most ministers of Revenue under the Ming from 1380, pp.13-14.

\(^7\) For a critique of how this important distinction between Chinese and Western political regime had been blurred by the dogmatic application of Marxist ideology in China. See Deng. See Liang and Meng 1991 for the dominance of Imperial lineage in Ming and Qing.
aristocracy and rewarded talents irrespective of class and origin laid the foundation for Qin’s military conquest and the subsequent construction of an empire based on a unitary imperial power. However, although Qin gave birth and form to the idea of a single unitary empire, the institutional crystallization of a centralized political structure supported by civil bureaucracy took centuries to evolve in response to various external threats and internal rebellions. In fact, during the millennium following the founding of Qin up till the Mongol-ruled dynasty (1280 – 1368 AD), China had been as fragmented as it was unified.

There were fundamental difficulties –both theoretical and technical - with a monolithic empire in the pre-modern era. Externally, it needs to deal with the periodic threat emanating largely from China’s unruly Northern frontiers. Internally, the legitimacy of one ruler above all was itself highly contentious and susceptible to dynastic struggles and internal rebellions. Chinese history is replete with violent rebellions and dynastic breakdowns led by regional magnates, frontier generals, or entrenched bureaucrats. The formidable information problem posed a fundamental dilemma to a unitary empire with pre-modern monitoring technology: the larger and more complex an empire grew, the more dependent a ruler would be on local well-informed agents under conditions of asymmetric information. This dependence would in turn render the ruler vulnerable to the risk of alternative power base built up locally. While in Europe, this dilemma simply created conditions for permanent and entrenched political fragmentation, in China, two complementary institutional changes in fiscal regime and civil bureaucracy gradually steered China onto a path of state centralization. Both institutional change, taken shape from the second millennium onward, formed what Wang Yanan claimed as the dual pillars of the traditional Chinese polities and were to have lasting consequences on long-term economic change in China.

A key advantage of a centralize state is its capacity to control and mobilize all factors of production to achieve state objectives. In this case, China accomplished a precocious transition to what He Wenkai termed as a traditional fiscal state which rests upon revenue obtained from taxing the economy in its entire territory as distinguished from domain states (or demesne state) in Western Europe, which drew income primarily from crown-owned property such as estates, forests, mines, and

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8 Qin’s own short-lived history is one such testimony.
To ensure state revenue, Chinese imperial rulers throughout dynasties had actively engaged in the allocation of land to peasants who could in turn cultivate and contribute taxes. The well-known equal-field system (均田制) as practiced in Tang (618-907 AD) allocated land (授田) to male adults according to his productive capacity, upon which the state levied the so-called triple tax (租庸调). Depending on the category of land title, some of the allocated land could be returned back to the state once the cultivator left or deceased. The equal field system aimed at direct taxation on individual producers and the prevention of large scale land-holding and regional power base. It required comprehensive household and land registration and strong administrative and coercive governmental power to tie labor down to an immobile factor, the land. In reality, state extractions or bureaucratic lapses often drove the farmers into the tax shelter of powerful regional lords, who, in turn, built upon both the productive and fighting capacities from their dependents to pose a constant threat to the throne. Thus, political struggle over land allocation and re-allocation became a perennial theme that saw the rise and fall of Chinese dynasties. (Shen 1996 chapter 4, Wang 1981 chapter 8, Qian, chapter 2, Twitchett, chapter 1).

In this light, the change from the triple tax system to the dual tax system (两税制) around 780 was a landmark transition. The dual tax system proposed by the then prime minister, Yang Yan (杨炎), shifted the taxation from labor to land irrespective of its ownership. This marked the beginning of a land-based taxation system which was to become the hallmark of Chinese fiscal regime all the way down to the 20th century. A taxation system targeting the immobile factor of land also enabled or led the state to eventually relinquish control and regulation of property rights in land, opening the path of recognizing de-facto private property rights and the development of a vibrant private land market. The imperial property rights in land and people began to transform into rights to taxation (Qian, chapter 2 and Shen chapter 4, Twitchett).

This institutional change in fiscal regime went hand in hand with another transformation in Chinese bureaucracy. As indicated earlier, Qin’s military success partly depended on its ability to

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draw loyal talents from below. However, before Tang dynasty, the system of directly recruiting bureaucrats from the populace remained ad-hoc, relying on a combination of informal recommendations and official examinations. By the Tang, as the civil service examination system developed and became increasingly important, it had gradually fallen under the control of official schools monopolized by elite lineages who turned into a social class of ruling bureaucrats with hereditary status (门第 or 门阀). The rise of an entrenched and closed bureaucratic class became one of the fundamental destabilizing forces to central Imperial rule.

It was around the 8th century that the system of official schools managed by the closed elite lineages began to decline, gradually opening up the civil service examination system to the general populace beyond the pupils of the official schools (Wu 2004, p.206-222). This marked the rise of the second pillar of China’s political structure that survived into the 20th century: a highly competitive and open civil service examination and impersonal bureaucracy. It opened up the prospect of upward mobility to the average people and more or less allowed a Chinese style of political participation from the bottom up (Ho Ping-ti 1967, Qian Mu). From the ruler’s perspective, the creation of a body of career officials having no autonomous territorial or functional power base was indispensable to the long-term stability the empire. With the installation of a system of rotating bureaucrats empire-wide in a period of three to five years and the rule of avoidance which precludes bureaucrats from serving in their home county, the empire designed an institution that would ensure the bureaucrats’ loyalty to the emperor rather than their constituents. Their promotions and punishments were disciplined through the administrative hierarchy guided by the detailed administrative codes of conduct. A civil bureaucracy inculcated in Confucian ideology contributed to civilian rule and demilitarization of the empire and was essential to the sustainability and longevity of the empire.

Meanwhile, the bureaucrat as a class and the powerful agents of the rulers, were incentivized with special privileges such as exemption from taxation and advantageous status in legal standing over the average people. The special status accorded to the class of people who passed various levels of civil service examinations produced a class of non-hereditary elites, the so-called gentry. Unlike those in the ranks of official bureaucracy which followed a system of the rotating appointments, the gentry elites tended to reside locally and served the function of managing local affairs often in collaboration
with the magistrates and governors (Chang Chung-li). This layer of elites becomes an important intermediary between the masses and the state, the implication of which will be dealt with in the concluding statement.

In sum, these two pillars of institutional changes originated in the late Tang and flourished in the Song, constituted what historians of China hailed as the Tang-Song Transformation (唐宋变革) that had long-lasting historical consequences. The resultant political consequence is that state-formation in China had decidedly tilted towards stable and centralized rule under one unitary imperial rule, in particular with absolutist imperial rule reigning supreme from the beginning of Ming in the 14th century. The rise of Chinese absolutist central rule, as predicted by narrative model, had also led a slow evolution towards fixing the target of annual taxation base (定额主义) (Ray Huang, Iwai). The adoption of the so-called single whip tax around the late 16th century, which denominated most land taxes in silver terms, further led to the monetization of an Imperial tax base set on a silver standard. Technically, setting a target of tax revenue usually based on pre-set household and land registry record greatly simplifies the administrative procedures and requires less information and monitoring capacities and thus reduces the potential for abuses. Low tax and light corvee had become the hallmark of rule of benevolence in China (仁政). In fact, historically, any deviation from the policy of fixed revenue signaled the bad omen of a dynasty in decline or crisis.

These political and institutional changes might account for China’s so-called Medieval economic revolution under the Song (960 – 1280 AD) as well as economic prosperity during the early modern era far better than other theories based on factor and natural resource endowments (Elvin, 1973, Pomeranz 2000). Under the Song, the dual tax policy allowed the government to retreat from direct management or regulation of property rights in land and led to the transition from estate farming to a system of a free-standing, family based owner-cum-tenant system of agricultural cultivation which is far more incentive compatible (漆侠). The policy of fixed revenue allowed the private sector rather than the state to capture or claim all the residuals of economic expansion brought about by rising productivity, growing territory and population. These institutional changes born out of the framework of a
centralized absolutist political regime generated a set of incentive structure conducive to a certain trajectory of extensive growth as demonstrated by the case of Qing China below.

**III. The Case of Qing China 1644-1911**

*The Imperial Rule of Benevolence*

The last and possibly the most powerful and centralized Chinese dynasty, as I want to argue here, epitomizes the most prominent features of this political economy model in action. The Qing Imperial monarchy under the rule of Manchus, a non-Han Chinese minority from China’s Northeast frontier, became a great defender of orthodox Confucius ideology and a champion of a centralized political system with a civil bureaucracy. The more than two and half century under the Qing saw roughly a tripling of her population and a doubling of territory and ushered in China’s prosperous 18th century, the so-called “Glorious World of Kanxi and Qianlong” (康乾盛世). (Maddison 2007, p.43, Jonathan Spence).

The road to the heyday of the 18th century prosperity started in 1644, the year of the Qing’s official inauguration. Like all previous rulers that managed to conquer a territory as vast as China, it takes about a further two decades for Qing army to achieve the complete suppression of the former Ming loyalists mostly based in the South of the Yangzi river. In the process of this suppression, the Han Chinese generals, upon whom the Qing rulers depended for military campaigns also built up independent military and administrative bases in Southwestern parts of China and began to pose a threat to the Imperial center. It was only in 1683 under the reign of Kangxi emperor (1661-1722) that Qing managed to quash the rebellion of these so-called “three feudatories” and annexed their territories into Qing’s centralized administration. Two years later, after years of blockade and military campaign, Kanxi finally broke the resistance of the rebellious naval kingdom of Zheng Chenggong and officially integrated the island of Taiwan into an administrative unit of China.

Qing’s attention turned to China’s Northern territory, an area that had historically posed threats to previous Chinese dynasties. One advantage that the Qing rulers had over their Han Chinese predecessors was precisely that the power bases of Manchus originated in China’s unruly Northern territories. In the final decades of the 17th century, the Qing contained the threat from an expansionary
Russia by signing the Treaty of Nerchinsk in 1689 and conquered China’s Northwestern territory in 1696. From 1720, Qing attained the control of Tibet with the installation of a new Dalai Lama (Jonathan Spence 1990). Clearly, by the early 18th century, the Qing succeeded in the consolidation of power and establishment of monopoly rule over a territory that had become the largest ever in Chinese history. More importantly, the Qing’s sphere of influence extended beyond its vast territory to other parts of Asia through the so-called tributary order, with states such as Korea, Vietnam, Burma and other Southeast Asian states recognizing various degrees of Chinese suzerainty. With the closing of Japan under the Tokugawa era (1680 – 1866), the dominance of Qing throughout Asia had been achieved beyond challenge. 10

The consolidation of power and monopoly of rule had set out the kind of long time horizon needed for Qing to shift towards a low-taxation equilibrium of the 18th century. Our political economy model lends new insights to the confident declaration by Kangxi emperor in 1712 that there will be no additional taxes on newly added taxable population (续生人丁, 永不加赋). Ten years later, the policy was firmly set in place by the fiscal reform measure of consolidating head tax into land tax (摊丁入地), the total amount of which would be fixed to the level recorded in the national record of 1710 (Shen, p. 184). This is clearly the most concrete and dramatic step towards the principle of fixed fiscal revenue.

Figure 1 which gives us the stocks of silver reserves at the Imperial Qing board of revenue provides us some crucial insights into the changing fiscal position of the Qing government. Starting from a fairly low level of silver reserves during the beginning years’ of Qing’s conquest, Qing’s fiscal savings improved greatly towards the end of the 17th century after the pacification of the rebels. Around the years of Kangxi’s declaration of tax increase freeze in 1712, accumulated silver stocks roughly amounted to the average of Qing’s annual revenue. The best years has yet to come in the mid-18th century of the Qianlong reign which saw the peak of Qing’s silver reserves in 1776. Silver reserves began to decline from the 19th century.

Figure 2 confirms the largely stationary character of the fiscal revenue (poxyed by expenditure in the figure) from the early 18th century until right before the mid-19th century which saw the breakout

10 This China-centered hierarchical world view was internalized by periphery states under strong Confucius influence such as Korea, Vietnam and to a certain extent, Japan, who, in turn, imposed what Takeshi Hamashita termed as a “satellite tributary system” upon other smaller states (chapter 1).
of the devastating Taiping Rebellion. If deflated by rice price, real expenditure (or taxation) as shown in figure 1, actually declined throughout the 17-18th centuries and stabilized until the mid-19th century. If factoring in population, real per capita expenditure or tax burden declined even more sharply from the late-17th century. Converted into kilograms of rice, per capita Chinese taxation was remarkably modest, amounting to something like two or three days of the wage earnings of an unskilled laborer (see Allen et al 2007 for Chinese laborers’ wage earnings). This seems consistent with Wang Yeh-chien’s more comprehensive calculation of tax revenue (which included guess-estimates for costs of tax collection as well as various extralegal local surcharges) as amounting to merely 2.4% of NNP even in the 1910s (p. 133). If Wang’s figure could be relied on for the 1910s, we have reason to believe government revenue as percentage of GDP would be even lower for the 18th century.11

Insert Figures 1 and 2

It is possible that Qing tax rates were the lowest across dynasties especially in per capita terms. Liu Guanglin’s study also seems to reveal that per capita tax burden in Qing around 1776 were probably the lowest across several benchmarks period since the Song dynasty. Liu’s calculation echoes the eloquent defense of the Qing regime in one of the most influential books published during Qing’s final decade. At a time when Qing was under serious domestic and external challenge, Zhang Zhidong’s review of fiscal policies through dynasties poignantly reminded the nation that the Qing regime under the glorious years of Kangxi and Qianlong, had frozen the annual target of fiscal revenue to possibly the lowest level in history, granted numerous tax exemptions in times of bad harvest, all out of the rulers’ benevolence towards their people (Zhang Zhidong, pp. 19-21).

Zhang’s defense of his former emperors would go down well with their own proud self-image. K’ang-xi stated that “in our Dynasty, the total sum of military and civil expenses is about the same as that of the Ming period. But speaking of the Court expenses, the aggregate amount spent by the Court is even less than that for one palace of the Imperial Concubines. The accumulated sum of the past 36 years is less than that spent in one year's time during the Ming.” In the same vein, the Qian-long emperor gloated over his frugal practices by saying that “(o)ur Dynasty practiced frugal habits for the

11 For the 1930s, gov. consumption was only 3.6% of NDE, Liu and Yeh, p. 68, also Rawski, ???
purpose of benefiting the people. Even in major military campaigns, the operations never entailed acquisitions from the people. Therefore with the aggrandisement of our territory and the achievement of military victories, the people at large never suffered. And speaking of the number of Imperial Concubines and serving women, taken all together, there were not more than two hundred in the Court. This is really unique in history” (cited in Chang te-ch’ang, p. 271).

Table 1 from Wang Yieh-chien’s classic study gives a breakdown of the revenue structure which reveals the predominance of land tax in total government revenue, amounting to as much as 74% of the total. Official government data on the expenditure side of the Imperial government reported for 1776 reveals that the upkeep of armies took up 78% of the total budget, followed by a share of 11.3% that went into the payment for bureaucrats. The Imperial household or Nei-wu-fu (内务府) consumption took in a mere 1% of the total budget (Shi Zhihong, p. 68. Iwai, p. 32). Clearly, these official figures need to be scrutinized before they can be taken at face value. Most likely, they represent serious under-estimate as Imperial extractions through the so-called Nei-wu-fu (内务府), as demonstrated by Chang te-ch’ang’s important study, also occurred outside the official balance sheet of the Board of Revenue. Nonetheless, it is more than likely that the total extraction of the Imperial throne from the whole economy remained modest at least in the 18th century.

Insert Table 1

*The Center and the Local*

In accordance with a ruler-dominated political structure, the traditional Chinese taxation system was highly centralized with most of the collected revenue accrued or allocated by the Imperial fiscal administration: the Ministry of Revenue. Local finance or fiscal needs at the county level where the lowest level of official bureaucracy resided figured little in this system. However, as the collection of taxes from highly dispersed and decentralized producing or marketing units across a giant empire and its remittance to the center or other regions entailed costs, the Qing government distinguished retained (存留) tax from and remitted ones (起运). In principle, the retained revenue formed the local budget to cover expenses for tax collection and local administration. But as Madeleine Zelin (p. 28) shows that retained revenue were only about 21.5% of total revenue in 1685. Even among this 21.5%, the bulk of
it was expended for local expenses connected with the center such as the provision for imperial armies and imperial relay station.

It has long been recognized that the official tax revenue allocated to the local government fell far short of the requirements of normal administration, often insufficient to cover the salaries of official bureaucrats, let alone their expenses and support staffs. Over time, it had become a tolerated practice for almost all levels of bureaucrats to turn to informal or the infamous extralegal surcharges (苛捐杂税) beyond the official level. At the local level, administration needs led the county magistrates to employ a large number of secretaries, clerks, runners and personal servants. Yet none of these staffs were on the official rolls and were employed personally by the magistrates out of these extralegal extractions.

Zelin’s study documents in detail the sources of these revenue ranging from the levying of various surcharges, manipulation of weights and measures and currency conversion in tax collection, falsifying reports, shifting funds across fiscal season years, retaining commercial tax revenue, hoarding tax revenue from newly claimed land and exacting contributions and donations from local farmers or merchants. Provincial level officials and their “unofficial” staffs relied on the extraction of gifts and contributions from the lower level officials and engaged in practices such as skimming funds off in purchase and allocation (buying at low price but reporting at high price) (Zelin, pp.46-71).

Local extralegal extractions had seriously compromised the so-called imperial objective of benevolence rule and constituted much of the reverse image of Qing being highly predatory, especially at the local level. Imposition of often arbitrary extralegal taxation created uncertainty and insecurity to the property rights of farmers and merchants. Reliance on informal local taxation and the employment of unofficial staffs for public administration often led to the privatization of public services. Among the voluminous studies, Ch’u Tung-tsu’s classic book on Qing local government offers a vivid portrayal of county clerks extracting bribes with the threat of delaying legal cases submitted, runners demanding so-called “chain-release money” from the families of the accused criminals who would otherwise have been put under chain and torture, retaining part of the “recovered goods” from theft or robbery, or sometimes resorting to outright extortion of wealthy residents with false accusations, even
the porters guiding the magistrate’s office would demand pay for handing in documents or warrants. All in all, clerks, runners and personal servants often collaborated in sharing the spoils of corruption.

This kind of nexus of corruption at the local level is a pale reflection of the much larger networks of collusion at different levels of the state machinery. Although levels of extraction are hierarchical from the provincial level down, deceit and collaboration were mutual across levels, creating layers of cover-ups among the officials and staffs that would frustrate imperial attempts to audit and inspect the expense accounts. Some shocking cases revealed that sometimes staffs kept duplicate set of account books, with the set for local use marked by secret codes impenetrable from the official examination. These special type of account books even circulated informally within a fairly wide area (Zelin p.240). Because of the prevalence of informal revenue and often Imperial acquiescence to corruption, it becomes particularly difficult to gauge how these informal taxation change our picture of fiscal revenue or extraction at the national level. It is important to note that Wang Yieh-chien’s calculation as shown in Table 1 included his guess-estimates of various extralegal surcharges, which amounted to about 24% of the final total for 1753 (Wang, p. 72, Table 4.2). It is very likely that Wang’s estimate is on the lower side as he himself pointed out that the mid-18th century represented one of the better years of Chinese bureaucracy. Clearly more research is needed in this field, but given Wang’s inclusive figure represent such a low share of the national income, I don’t believe any reasonable upper bound estimate would change the conclusion that overall level of tax extraction remained modest. The real problem of informal taxation may not lie so much in its level of extraction but rather in its distortionary effects on economic incentives (See Schleifer and Vishny for the deleterious effects of corruption).

Information and Incentives in Imperial Qing

The insufficiency of local finance under a fixed target of fiscal budget was not a uniquely Qing phenomenon. As pointed out by G. William Skinner, China in the 1720s had fewer county-level administrative units than it had had in the Han dynasty (206BC – 220AD), which had far smaller population and territory. To match the ratio of population to administrative units as in Han, China would necessitate 8500 administrative counties rather than 1360 in the 1720s. And to fund these
administrative expenses at that level would take the entire land and head taxes of the Qing in the 1720s (Zelin, p. 306). On the surface of its, there seems to exist a fundamental contradiction between the Qing imperial ideology of benevolence based on fixed target of taxation and their toleration and to certain degree, reliance on informal extraction at the lower level.

However, the political economy framework structured in the historical context can reconcile this seeming contradiction. With the Imperial ruler evolving towards a policy of fixed revenue target for the central government. With tax-collection being one of the most important functions of bureaucracy, fixed revenue would naturally be equated with the fixing of bureaucracy and administrative units. Secondly, like other agents of the economy, bureaucrats were their own revenue maximizers who were prone to fiscal expansion if unchecked. Imperial attempts to expand tax bases rarely curbed unofficial extractions on the part of bureaucrats, but rather ended up legitimizing a higher tax target at the expense of the Imperial reputation of benevolence. Thirdly, with the hierarchical command structure, any “visible” bases of tax revenue at the lower level faced the risk of extraction from the top. In this sense, informal taxation, being outside the official purview, ironically became the most secure source of local finance. In fact, throughout the dynasties, corruption itself was connived within the system as long as it was not excessive to disturb social stability and induce insurrection. In this sense, the bureaucracy, given the various social and legal privileges, was also part of rent-seeking coalition with the rulers.

The well-known fiscal reform carried out by the Yongzheng emperor from 1724 illustrates this fundamental dilemma. Clearly aware of the bureaucratic abuses resulting from the insufficient local finance, the energetic Yongzheng emperors adopted policies to increase surcharges to land taxes, which were, in essence, a legitimization of previously “illegal” extractions, to be incorporated into official budget as local finance. The reform, as pointed by Zelin, is significant in that it represents a major attempt to curb arbitrary extraction and to extend formal governmental power to the local level. The reform overall achieved far more success in Northern Chinese provinces than those in the South, few would dispute that Yongzheng fiscal reform laid the foundation for the strong fiscal position of the Qianglong period from the mid-18th century onward, as illustrated in figure 2.
However, towards the end of the 18th century, the Yongzheng fiscal policy had only existed in name. The Yongzheng emperor implemented the audacious fiscal reform through his own communication channels and trusted officials, bypassing the formal bureaucracy. Institutional support for the Yongzheng reform was greatly weakened after his death in 1735. But more importantly, the Yongzheng reform were largely abandoned as it could not solve the dual problems of the inability of the higher administration to monitor the use of local revenue and the tendency for upper level bureaucracy to engage in extraction and re-allocation of revenue designed for local use. (see Zelin for details). The difficulty to resist extraction within this hierarchical system can be illustrated in the dilemma of the Board of Revenue, China’s highest authority of imperial revenue, who faced the direct revenue demands of the emperor. In a memorial sent by the Board of Revenue to the Emperor in 1872, the minister stated:

“A line must be drawn between the Nei-wu-fu and the government Treasury which has been established by our early ancestors… The revenue of this Board is fixed, but the borrowing of the Nei-wu-fu is indefinite. During these recent years, it has demanded from 800,000 taels up to 1,300,000 taels. We scraped here and there to comply with their demands, but at the end of this month, all we have in stock is a bare pitiful sum of 200,000 taels….We request your majesty to instruct the Nei-wu-fu to observe faithfully the tradition:… so that unnecessary expenses can be curtailed and national revenue can be preserved…. (Chang, p. 269)

IV. The China-Europe Comparison

It is only ironic that on the end of the Eurasia, where ideology of liberalism and constitutional constraints against monarchy reigned supreme, the modern states of the Netherlands and Great Britain managed to reach deep into the wealth of their citizens and extracted an ever increasing amount of tax revenue in the early modern era. Figure 3 vividly illustrates the divergent paths of the imperial fiscal revenue in 17-18th centuries. While revenue accrued to the Board of Revenue (戸部) of Qing China remained largely stagnant or declined slightly in real terms, tax receipts at the Exchequer of Britain rose by a stunning 17 fold from 1665 to 1815. The total British revenue as a share of national income before the Glorious Revolution of 1688, surged from slightly more than 3% - a rate not drastically
different from that of the Qing in the 18-19th century – to about 18% by 1810 (O’Brien 1988, p. 3). By the 19th century, Britain became the second most heavily taxed nation in the world only after Holland (van Zanden and Prak 2006, p. 130).

Again, as distinguished from Chinese revenue which had been firmly locked into direct taxes on land, the surge in British tax receipts came disproportionately from indirect taxes such as customs and excise duties, which accounted for nearly 80% of total revenue towards the end of the 18th century (O’Brien 1988, pp. 9-10). More importantly, as noted by various scholars, fiscal expansion transformed Britain into a modern fiscal state marked by the rise of a Weberian type of professional bureaucracy, which more than tripled between the 1690s and the 1780s (Brewer, pp. 66-67). The British development of a civil and fiscal administration that evolved towards professionalism, political neutrality, transparency and accountability presents a sharp contrast to those of other absolutist states such as France and Spain where rising fiscal needs increased state dependence on tax-farming, venality, and other short-term measures that were susceptible to corruption and rent-seeking (O’Brien 1988, 2006, Brewer 1988, Ertman 1997).

While the High Qing could boast of its vast silver reserves at the vault in the 18th century, the British state ran persistent budget deficits to cope with the rising escalation of warfare. But it was precisely its administrative capacity to generate greater revenue from the growing sector of the economy enabled the British state to capitalize (or mortgage) its future revenue through the financial sector. Thus the growth of a modern fiscal state in turn laid the foundation for the growth in financial intermediaries and the trading of financial assets, the bulk of which consisted of high-quality government debt instruments. With the incorporation of Bank of England in 1694, the London financial market had grown to take leadership in European financial markets. Despite the state being persistently in the red especially in times of war, the credibility of the British government supported her fiscal capacity led to a long-term decline in borrowing cost of the state (North and Weingast 1988). Enhanced state capacity not only strengthened British warfare capabilities and overseas explorations in Europe and beyond, but also extended the formal state power to the economic sphere. As shown by Dan Bogart, the surge of parliamentary legislation from the late 17th century onward had served to
support changes in property rights regime, the construction of public infrastructures such as roads and canals conducive to economic growth (Bogart and Richardson).

The divergent path of state-building between Qing China and early modern Britain stems from the historical paths of two different political structures that had evolved since the ancient time. Since the fall of the Rome empire, the political landscape of Western Europe had been dominated by political fragmentation with decentralized, small scale and autonomous political units characterized by a host of regimes such as feudal fiefdoms, city-states as well as kingdoms. In this political landscape, both the limited size of these political units and the development of some form of representative institutions within these units forestalled the kind of incentive misalignment and asymmetric information problems that plagued large empires. Rulers in this type of corporate or representative institution represented the economic and commercial interests of a coalition or class of the property elites. Although a tiny minority among the large population, these elite interests became the driving force behind the rise of mercantilism and overseas expansion. Given these institutional advantage, it is not surprising that those city-states strategically located along commercial routes became the seat of institutional innovation and forerunners of modern capitalism.

However, small size became a disadvantage when economic activities grew in size that would require coordination across different political units. The high costs of coordination embedded in a system of political fragmentation became a bottleneck to further economic expansion and prompted what Epstein termed as late-Medieval integration crisis in Western Europe (Epstein 2000). Even for those so-called absolutist states such as Spain and France that managed to expand in the early modern era, their rulers did not have the nominal type of total power of the Chinese emperors. Their power to tax the population directly was constrained by regional magnates and aristocrats. Power sharing and factional bargaining often led to rent-seeking for the benefit of a narrow or regional interest (Ertman 1997).

By European standard, the English state in the Medieval period was relatively centralized (Joseph Strayer, Ertman 1997). In particular, the representative institution in England, the Parliament, was organized from very early on a national scale to bargain collectively with the English monarchy. The rise of a national parliament particularly from the 17th century served an important node and forum
for transmitting information and incentives of the propertied interest and reducing the potential for faction-based rent-seeking that characterized other more decentralized absolutist states of Western Europe. The parliamentary victory over the monarchy following the Glorious Revolution of 1688 further enabled the British Parliament to act as the stake holders of the propertied interest in the national economy and the monarchy to evolve towards an executive government. As argued by John Brewer and Thomas Ertman, parliamentary supervision and the rationalization of executive power laid the foundation for the rise of a modern bureaucracy and a fiscal state. The development of a professional, routinized and accountable bureaucratic machine that ensures the attainment of state objective without being compromised by tax-farming, rent-seeking or corruption.

It is important to note that this is not just an extension of any state power, but one constrained and defined by the interest and incentives of the stake-holders. As John Brewer pointed out, it was precisely because the state power was so narrowly defined that it could be used so effectively (p.??). This British model of political governance can be characterized as a corporate model where stake holders, through tax contribution, acquired the right to oversee the executive power. This model had its origin in Western legal tradition and was widely adopted by smaller social and political units before its development in a scale as large as Britain in the 17-18th century (Huff, Epstein, Strayer, Post).

Figure 4, as reproduced from Epstein (2006), illustrates the stylized progression of fiscal efficiency and financial market under different political regimes from the Medieval period. The stylized picture of a progressive decline in long-term interest rates under competing political regimes in Western Europe forms a sharp contrast to the high and variable rates of interest prevailing in China and lack of any formal large-scale financial markets (ref.?). These differential rates of interest on the two ends of Eurasia speak to a contrast much more significant than just the differential levels of financial development. They represent the contrast of two different model of states: that of a “corporate” model in Western Europe versus a that of a “state-family” in China. More importantly, they represent two different dynamics at motion. With the consolidation of central rule in China especially since the Ming, political experimentation not only within China, but even in China-dominated East Asia, were no longer possible, a process in sharp contrast to the co-evolution of different regimes in the West as displayed in figure 4.
Conclusion

Through a narrative model of the Chinese state, this article stresses the importance of institutions as a determinant to both the long-run economic growth and the great divergence between China and Western Europe in the early modern era. It shows that the corporate model of states that evolved in Western Europe helped resolve some of the fundamental incentive and information problems embedded in a centralized and hierarchical political structure. In a corporate model of the state, the security of property rights and freedom from extraction is no longer tied to the time horizon of the rulers, who were transformed into executive powers guided by the interest of the stake-holders. This is a point originally made by Mancur Olson (1993) (who used the much less accurate term “democracy” rather than corporatism).

In an absolutist regime, while the reliance on governmental commitment to property rights and political stability through monopoly of power and long time-horizon of rule could lead to a virtuous equilibrium of low-extraction and the operation of a relatively free private economy, it could have long-term consequences. The massive withholding of private information among the actors, while effectively tying the grabbing hands of an absolutist state, often, simultaneously weakens the societal capacity to organize collective action and severely curtails possibilities for institutional change within the political regime in favour of economic growth. Attempts to achieve monopoly of rule and contain alternative power bases also incurs the high cost at the expense of civil society organization. There were no lack of coalition or organization of various interest groups, such as gentry class, lineage association, native-place based social groups. However, they were informally organized outside the formal state arena and each of them individually tended to represent a narrow set of local or factionalized interest. In the absence of formal recognition (such as the “corporate” bodies in the West) and an formal and open channel of communication or national forum (as in the representation institutions in the European polities), these social groups were firstly, prone to bargaining for their
particular interests or privileges at the expense of the larger interest and secondly, and secondly, bargaining under the constraints of a very narrow information.

Furthermore, there emerged a reverse incentive problem once the Chinese Imperial state switching to a fixed target of tax revenue. With the Central government itself no longer having a stake in the growth of the economy, it led to the rise of “lassie-faire” Chinese style, or what Avner Greif (2005) termed as the absent government in some of the private sectors where growth and expansion in scale increasingly required the involvement of formal state power. It is clear that by the 18th century, the bulk of Qing involvement in the private sector by the 18th century aimed at risk reduction and social stability rather than economic expansion: the encouragement of opening up new land to accommodate a growing population, tax exemption and famine relief in bad times. In areas where social stability or government taxation revenue were not directly related, formal imperial power rarely reached into commerce, trade, finance and monetary sectors, which were largely unregulated and unprotected (reference ???). Clearly, it is the insurrection constraint rather than the interest of the stake-holders that was the driving force behind the Qing policy. While these may not be fundamental issues for a largely agrarian society where production units were small and properly incentivized, they became a problem when the scale of production and marketing grew to require a level of collective action that was beyond the organizational capacities of private agents. There is a missing link between the private agents and state power embedded in the incentive structure of absolutist regime in early modern China. In this regard, political events such as the mid-19th century Opium War and the opening of China in the late 1970s are indeed historical turning points whose significance should be reinterpreted as watershed events that by opening the country, exposed the Chinese monopoly rule to potential political competition in new global settings.
Bibliography (Incomplete)


Allen, R.C, Jean-Pascal Bassino, Debin Ma, Christine Moll-Murata and Jan Luiten van Zanden “Wages, Prices, and Living Standards in China, Japan, and Europe, 1738-1925” Unpublished working paper.


He, Wenkai, Ph.d Thesis, MIT, 2008.


Chinese:

Deng, Jianpeng (邓建鹏) (The Poverty of Property Rights – Studies on Traditional Chinese Civil Law). "

Wang, Yanan (王亚南) (The Politics of Chinese Bureaucracy). "

Zhang Zhidong (张之洞) (Statistics on the Stocks, Receipts and Expenditures of the Vaults of the Qing Board of Revenue). "

Shi Zhihong (史志宏) (Statistics on the Stocks, Receipts and Expenditures of the Vaults of the Qing Board of Revenue). "
Shen, Xianggang (孙翊刚) 主编 中国赋税史 (A History of Chinese Taxation) 中国财政经济出版社 1996。

Qian Mu (钱穆) 中国历代政治得失 (The Gains and Losses of Chinese Dynastic Politics) 香港 : 大中国印刷厂 1966。


Japanese:
Table 1. Tax structure of China in the Qing period (in 1000 taels)

<table>
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<th>1753 Total</th>
<th>1753 Percentage</th>
<th>1908 Total</th>
<th>1908 Percentage</th>
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<td>Land tax</td>
<td>73.5</td>
<td>35.1</td>
<td>24.5</td>
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<td>Ti-ting</td>
<td>37517</td>
<td>50.8</td>
<td>71413</td>
<td>24.5</td>
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<td>grain (in kind)</td>
<td>16697</td>
<td>22.6</td>
<td>31004</td>
<td>10.6</td>
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<tr>
<td>Other taxes</td>
<td>26.5</td>
<td>64.9</td>
<td></td>
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<td>Salt tax</td>
<td>8768</td>
<td>11.9</td>
<td>45000</td>
<td>15.4</td>
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<td>Native Customs</td>
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<td>7.3</td>
<td>6700</td>
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<tr>
<td>Maritime Customs</td>
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<td>surcharge</td>
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</table>

Source notes: adapted from Wang, p.80, Tables 4.1,4.2,4.3 4.8
Figure 1. Government Expenditure (Revenue) in Qing China

Source Notes: Fiscal data from Iwai, Table 2, p.37. Hamashita p. 73. Population data from Maddison 2007 and Lower Yangzi grain price from Wang Yeh-chien was used to deflate the nominal series.
Figure 2. Silver Reserves at the Qing Ministry of Revenue (in 10,000 Taels)

Source: Shi Zhihong, p. 104.
Figure 3. The Great Divergence: Nominal and Real Indices of Central Government Fiscal Revenue in China and Britain in Natural Logs (1665 = 100)

Sources: UK data from O’Brien 1988, p.3, Chinese data same as Figure 2.
Figure 4. Evolution of Political Regimes, Fiscal Efficiency and Financial Market

Fiscal efficiency = function of Capital markets and Fiscal sovereignty

Sources: reproduced from Epstein 2006